TITLE: TRACK IDENTIFICATION CODEWORDS HAVING MULTIPLE BIT ERROR
CORRECTION CAPABILITY AND GENERALIZED GRAY CODE PROPERTY
INVENTOR: JAI N. SUBRAHMANYAM
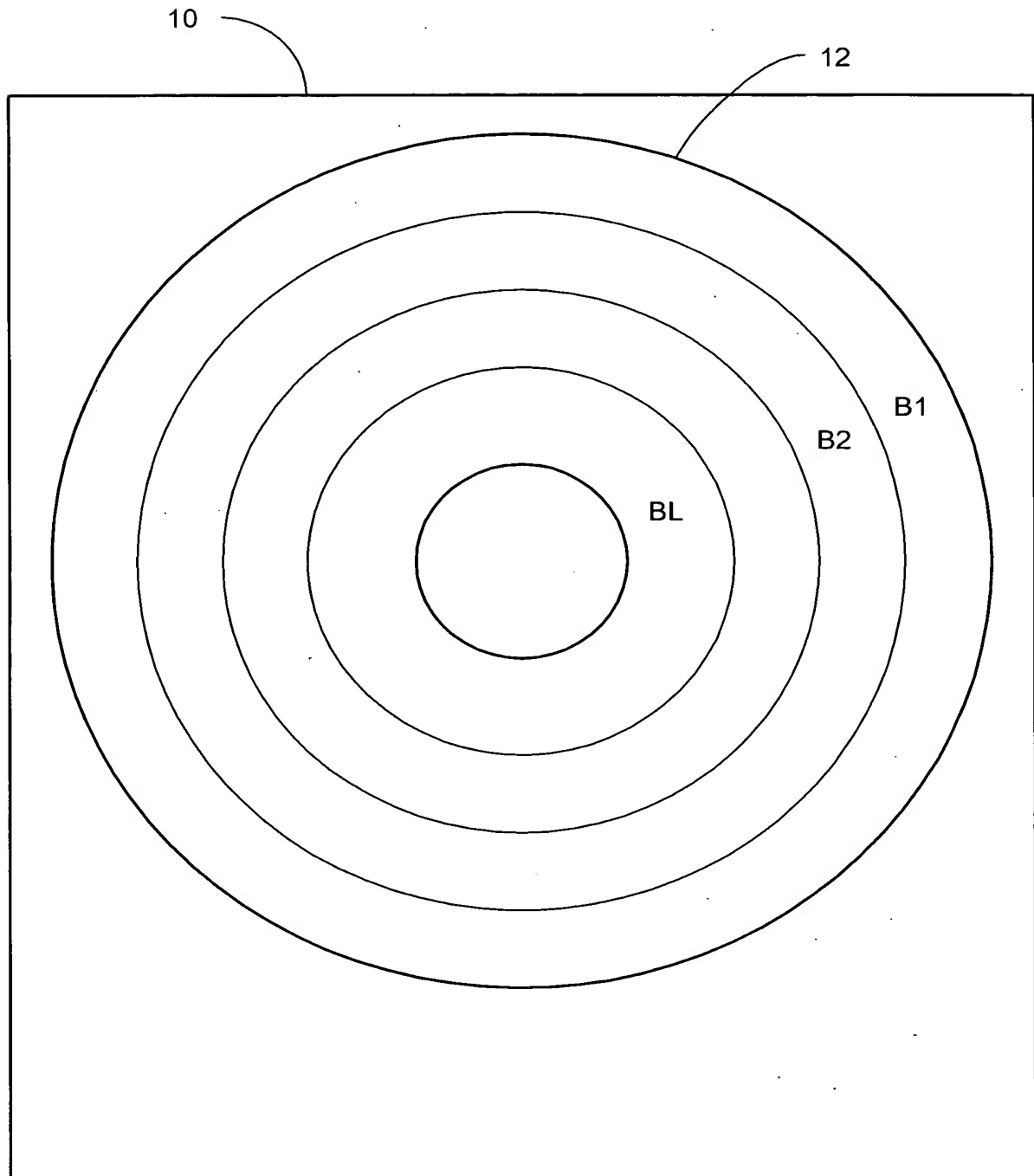ATTY DOCKET NUMBER: K35A1290

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FIG. 1

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B1 TRACK 0   CW = 000 0000 0000 0000

B1 TRACK 1   CW = 000 0001 1001 0110   —14

B1 TRACK 2   CW = 000 0011 0101 0101

.

.

.

B1 TRACK 63 CW = 010 0000 1100 1100

B2 TRACK 0   CW = 000 0000 0000 0000

B2 TRACK 1   CW = 000 0001 1001 0110

B2 TRACK 2   CW = 000 0011 0101 0101

.

.

.

B2 TRACK 63 CW = 010 0000 1100 1100

.

.

.

BL TRACK 0   CW = 000 0000 0000 0000

BL TRACK 1   CW = 000 0001 1001 0110

BL TRACK 2   CW = 000 0011 0101 0101

.

.

.

BL TRACK 63 CW = 010 0000 1100 1100

FIG. 2

TITLE: TRACK IDENTIFICATION CODEWORDS HAVING MULTIPLE BIT ERROR
CORRECTION CAPABILITY AND GENERALIZED GRAY CODE PROPERTY
INVENTOR: JAI N. SUBRAHMANYAM
ATTY DOCKET NUMBER: K35A1290

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TID	CODEWORD (15,7)
0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
1	0 0 0 0 0 0 1 1 0 0 1 0 1 1 0
2	0 0 0 0 0 1 1 0 1 0 1 0 1 0 1
3	0 0 0 0 0 1 0 1 1 0 0 0 0 1 1
4	0 0 0 0 1 1 0 0 1 1 0 0 1 1 0
5	0 0 0 0 1 1 1 1 1 1 0 0 0 0 0
6	0 0 0 0 1 0 1 0 0 1 1 0 0 1 1
7	0 0 0 0 1 0 0 1 0 1 0 0 1 0 1
8	0 0 0 1 1 0 0 0 1 0 1 0 1 0 1
9	0 0 0 1 1 0 1 1 1 0 0 0 0 1 1
10	0 0 0 1 1 1 1 0 0 0 0 0 0 0 0
11	0 0 0 1 1 1 0 1 0 0 1 0 1 1 0
12	0 0 0 1 0 1 0 0 0 1 1 0 0 1 1
13	0 0 0 1 0 1 1 1 0 1 0 0 1 0 1
14	0 0 0 1 0 0 1 0 1 1 0 0 1 1 0
15	0 0 0 1 0 0 0 1 1 1 1 0 0 0 0
16	0 0 1 1 0 0 0 0 1 1 0 1 0 0 1
17	0 0 1 1 0 0 1 1 1 1 1 1 1 1 1
18	0 0 1 1 0 1 1 0 0 1 1 1 1 0 0
19	0 0 1 1 0 1 0 1 0 1 0 1 0 1 0
20	0 0 1 1 1 0 0 0 0 0 0 1 1 1 1
21	0 0 1 1 1 1 1 0 0 1 1 0 0 1 1
22	0 0 1 1 1 0 1 0 1 0 1 1 0 1 0
23	0 0 1 1 1 0 0 1 1 0 0 1 1 0 0
24	0 0 1 0 1 0 0 0 0 1 1 1 1 0 0
25	0 0 1 0 1 0 1 1 0 1 0 1 0 1 0
26	0 0 1 0 1 1 1 0 1 1 0 1 0 0 1
27	0 0 1 0 1 1 0 1 1 1 1 1 1 1 1
28	0 0 1 0 0 1 0 0 1 0 1 1 0 1 0
29	0 0 1 0 0 1 1 1 1 0 0 1 1 0 0
30	0 0 1 0 0 0 1 0 0 0 0 1 1 1 1
31	0 0 1 0 0 0 0 1 0 0 1 1 0 0 1

TID	CODEWORD (15,7)
32	0 1 1 0 0 0 0 0 1 0 1 0 1 0 1
33	0 1 1 0 0 0 1 1 1 0 0 0 0 1 1
34	0 1 1 0 0 1 1 0 0 0 0 0 0 0 0
35	0 1 1 0 0 1 0 1 0 0 1 0 1 1 0
36	0 1 1 0 1 1 0 0 0 1 1 0 0 1 1
37	0 1 1 0 1 1 1 1 0 1 0 0 1 0 1
38	0 1 1 0 1 0 1 0 1 1 0 0 1 1 0
39	0 1 1 0 1 0 0 1 1 1 1 0 0 0 0
40	0 1 1 1 1 0 0 0 0 0 0 0 0 0 0
41	0 1 1 1 1 0 1 1 0 0 1 0 1 1 0
42	0 1 1 1 1 1 1 0 1 0 1 0 1 0 1
43	0 1 1 1 1 1 0 1 1 0 0 0 0 1 1
44	0 1 1 1 0 1 0 0 1 1 0 0 1 1 0
45	0 1 1 1 0 1 1 1 1 1 1 0 0 0 0
46	0 1 1 1 0 0 1 0 0 1 1 0 0 1 1
47	0 1 1 1 0 0 0 1 0 1 0 0 1 0 1
48	0 1 0 1 0 0 0 0 0 1 1 1 1 0 0
49	0 1 0 1 0 0 1 1 0 1 0 1 0 1 0
50	0 1 0 1 0 1 1 0 1 1 0 1 0 0 1
51	0 1 0 1 0 1 0 1 1 1 1 1 1 1 1
52	0 1 0 1 1 1 0 0 1 0 1 1 0 1 0
53	0 1 0 1 1 1 1 1 0 0 1 1 0 0 1
54	0 1 0 1 1 0 1 0 0 0 0 1 1 1 1
55	0 1 0 1 1 0 0 1 0 0 1 1 0 0 1
56	0 1 0 0 1 0 0 0 1 1 0 1 0 0 1
57	0 1 0 0 1 0 1 1 1 1 1 1 1 1 1
58	0 1 0 0 1 1 1 0 0 1 1 1 1 0 0
59	0 1 0 0 1 1 0 1 0 1 0 1 0 1 0
60	0 1 0 0 0 1 0 0 0 0 0 1 1 1 1
61	0 1 0 0 0 1 1 1 0 0 1 1 0 0 1
62	0 1 0 0 0 0 1 0 1 0 1 1 0 1 0
63	0 1 0 0 0 0 0 1 1 0 0 1 1 0 0

FIG. 3A

FIG. 3B

TITLE: TRACK IDENTIFICATION CODEWORDS HAVING MULTIPLE BIT ERROR
CORRECTION CAPABILITY AND GENERALIZED GRAY CODE PROPERTY
INVENTOR: JAI N. SUBRAHMANYAM
ATTY DOCKET NUMBER: K35A1290

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TID	CODEWORD (15,7)
64	1 1 0 0 0 0 0 0 1 1 0 0 1 1 0
65	1 1 0 0 0 0 1 1 1 1 1 0 0 0 0
66	1 1 0 0 0 1 1 0 0 1 1 0 0 1 1
67	1 1 0 0 0 1 0 1 0 1 0 0 1 0 1
68	1 1 0 0 1 1 0 0 0 0 0 0 0 0 0
69	1 1 0 0 1 1 1 1 0 0 1 0 1 1 0
70	1 1 0 0 1 0 1 0 1 0 1 0 1 0 1
71	1 1 0 0 1 0 0 1 1 0 0 0 0 1 1
72	1 1 0 1 1 0 0 0 0 1 1 0 0 1 1
73	1 1 0 1 1 0 1 1 0 1 0 0 1 0 1
74	1 1 0 1 1 1 1 0 1 1 0 0 1 1 0
75	1 1 0 1 1 0 1 1 1 1 0 0 0 0 0
76	1 1 0 1 0 1 0 0 1 0 1 0 1 0 1
77	1 1 0 1 0 1 1 1 0 0 0 0 0 1 1
78	1 1 0 1 0 0 1 0 0 0 0 0 0 0 0
79	1 1 0 1 0 0 0 1 0 0 1 0 1 1 0
80	1 1 1 1 0 0 0 0 0 0 0 1 1 1 1
81	1 1 1 1 0 0 1 1 0 0 1 1 0 0 1
82	1 1 1 1 0 1 1 0 1 0 1 1 0 1 0
83	1 1 1 1 0 1 0 1 1 0 0 1 1 0 0
84	1 1 1 1 1 0 0 1 1 0 1 0 0 1
85	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
86	1 1 1 1 1 0 1 0 0 1 1 1 1 0 0
87	1 1 1 1 1 0 0 1 0 1 0 1 0 1 0
88	1 1 1 0 1 0 0 0 1 0 1 1 0 1 0
89	1 1 1 0 1 0 1 1 1 0 0 1 1 0 0
90	1 1 1 0 1 1 1 0 0 0 0 1 1 1 1
91	1 1 1 0 1 1 0 1 0 0 1 1 0 0 1
92	1 1 1 0 0 1 0 0 0 1 1 1 1 0 0
93	1 1 1 0 0 1 1 1 0 1 0 1 0 1 0
94	1 1 1 0 0 0 1 0 1 1 0 1 0 0 1
95	1 1 1 0 0 0 0 1 1 1 1 1 1 1 1

FIG. 3C

TID	CODEWORD (15,7)
96	1 0 1 0 0 0 0 0 0 1 1 0 0 1 1
97	1 0 1 0 0 0 1 1 0 1 0 0 1 0 1
98	1 0 1 0 0 1 1 0 1 1 0 0 1 1 0
99	1 0 1 0 0 1 0 1 1 1 1 0 0 0 0
100	1 0 1 0 1 1 0 0 1 0 1 0 1 0 1
101	1 0 1 0 1 1 1 1 1 0 0 0 0 1 1
102	1 0 1 0 1 0 1 0 0 0 0 0 0 0 0
103	1 0 1 0 1 0 0 1 0 0 1 0 1 1 0
104	1 0 1 1 1 0 0 0 1 1 0 0 1 1 0
105	1 0 1 1 1 0 1 1 1 1 1 0 0 0 0
106	1 0 1 1 1 1 0 0 1 1 0 0 1 1
107	1 0 1 1 1 1 0 1 0 1 0 0 1 0 1
108	1 0 1 1 0 1 0 0 0 0 0 0 0 0 0
109	1 0 1 1 0 1 1 1 0 0 1 0 1 1 0
110	1 0 1 1 0 0 1 0 1 0 1 0 1 0 1
111	1 0 1 1 0 0 0 1 1 0 0 0 0 1 1
112	1 0 0 1 0 0 0 0 1 0 1 1 0 1 0
113	1 0 0 1 0 0 1 1 1 0 0 1 1 0 0
114	1 0 0 1 0 1 1 0 0 0 0 1 1 1 1
115	1 0 0 1 0 1 0 1 0 0 1 1 0 0 1
116	1 0 0 1 1 1 0 0 0 1 1 1 1 0 0
117	1 0 0 1 1 1 1 0 1 0 1 0 1 0
118	1 0 0 1 1 0 1 0 1 1 0 1 0 0 1
119	1 0 0 1 1 0 0 1 1 1 1 1 1 1 1
120	1 0 0 0 1 0 0 0 0 0 0 1 1 1 1
121	1 0 0 0 1 0 1 1 0 0 1 1 0 0 1
122	1 0 0 0 1 1 1 0 1 0 1 1 0 1 0
123	1 0 0 0 1 1 0 1 1 0 0 1 1 0 0
124	1 0 0 0 0 1 0 0 1 1 0 1 0 0 1
125	1 0 0 0 0 1 1 1 1 1 1 1 1 1 1
126	1 0 0 0 0 0 1 0 0 1 1 1 1 0 0
127	1 0 0 0 0 0 0 1 0 1 0 1 0 1 0

FIG. 3D

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TID	CODEWORD (15,7)														
19	0	0	1	1	0	1	0	1	0	1	0	1	0	1	0
20	0	0	1	1	1	1	0	0	0	0	0	1	1	1	1
D = 5	-	-	-	-	X	-	-	X	-	X	-	-	X	-	X

FIG. 4

TID	CODEWORD (15,7)														
19	0	0	1	1	0	1	0	1	0	1	0	1	0	1	0
21	0	0	1	1	1	1	1	1	0	0	1	1	0	0	1
D = 6	-	-	-	-	X	-	X	-	-	X	X	-	-	X	X

FIG. 5

TID	CODEWORD (15,7)														
19	0	0	1	1	0	1	0	1	0	1	0	1	0	1	0
94	1	1	1	0	0	0	1	0	1	1	0	1	0	0	1
D = 9	X	X	-	X	-	X	X	X	X	-	-	-	-	X	X

FIG. 6

TID	CODEWORD (15,7)														
93	1	1	1	0	0	1	1	1	0	1	0	1	0	1	0
94	1	1	1	0	0	0	1	0	1	1	0	1	0	0	1
D = 5	-	-	-	-	-	X	-	X	X	-	-	-	-	X	X

FIG. 7

TITLE: TRACK IDENTIFICATION CODEWORDS HAVING MULTIPLE BIT ERROR
CORRECTION CAPABILITY AND GENERALIZED GRAY CODE PROPERTY
INVENTOR: JAI N. SUBRAHMANYAM
ATTY DOCKET NUMBER: K35A1290

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$$G7 = \begin{bmatrix} 1\,0\,0\,0\,0\,0\,0\,1\,0\,1\,0\,1\,0\,1\,0 \\ 0\,1\,0\,0\,0\,0\,0\,1\,1\,0\,0\,1\,1\,0\,0 \\ 0\,0\,1\,0\,0\,0\,0\,1\,0\,0\,1\,1\,0\,0\,1 \\ 0\,0\,0\,1\,0\,0\,0\,1\,1\,1\,1\,0\,0\,0\,0 \\ 0\,0\,0\,0\,1\,0\,0\,1\,0\,1\,0\,0\,1\,0\,1 \\ 0\,0\,0\,0\,0\,1\,0\,1\,1\,0\,0\,0\,0\,1\,1 \\ 0\,0\,0\,0\,0\,0\,1\,1\,0\,0\,1\,0\,1\,1\,0 \end{bmatrix}$$

FIG. 8

$$H8 = \begin{bmatrix} 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\ 1 & -1 & 1 & -1 & 1 & -1 & 1 & -1 \\ 1 & 1 & -1 & -1 & 1 & 1 & -1 & -1 \\ 1 & -1 & -1 & 1 & 1 & -1 & -1 & 1 \\ 1 & 1 & 1 & 1 & -1 & -1 & -1 & -1 \\ 1 & -1 & 1 & -1 & -1 & 1 & -1 & 1 \\ 1 & 1 & -1 & -1 & -1 & -1 & 1 & 1 \\ 1 & -1 & -1 & 1 & -1 & 1 & 1 & -1 \end{bmatrix} \Big\} P$$

FIG. 9

TITLE: TRACK IDENTIFICATION CODEWORDS HAVING MULTIPLE BIT ERROR
CORRECTION CAPABILITY AND GENERALIZED GRAY CODE PROPERTY
INVENTOR: JAI N. SUBRAHMANYAM
ATTY DOCKET NUMBER: K35A1290

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$$
G11 = \begin{bmatrix}
1 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & 0 & 1 & 0 & 1 & 1 & 1 & 0 & 0 & 0 & 1 & 0 \\
0 & 1 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & 0 & 0 & 1 & 0 & 1 & 1 & 1 & 0 & 0 & 0 & 1 \\
0 & 0 & 1 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & 1 & 0 & 0 & 1 & 0 & 1 & 1 & 1 & 0 & 0 & 0 \\
0 & 0 & 0 & 1 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & 0 & 1 & 0 & 0 & 1 & 0 & 1 & 1 & 1 & 0 & 0 \\
0 & 0 & 0 & 0 & 1 & 0 & 0 & 0 & 0 & 0 & 1 & 0 & 0 & 1 & 0 & 0 & 1 & 0 & 1 & 1 & 1 & 0 \\
0 & 0 & 0 & 0 & 0 & 1 & 0 & 0 & 0 & 0 & 1 & 0 & 0 & 0 & 1 & 0 & 0 & 1 & 0 & 1 & 1 & 1 \\
0 & 0 & 0 & 0 & 0 & 0 & 1 & 0 & 0 & 0 & 1 & 1 & 0 & 0 & 0 & 1 & 0 & 0 & 1 & 0 & 1 & 1 \\
0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & 0 & 0 & 0 & 1 & 1 & 1 & 0 & 0 & 0 & 1 & 0 & 0 & 1 & 0 & 1 \\
0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & 0 & 0 & 1 & 1 & 1 & 1 & 0 & 0 & 0 & 1 & 0 & 0 & 1 & 0 \\
0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & 0 & 1 & 0 & 1 & 1 & 1 & 0 & 0 & 0 & 1 & 0 & 0 & 1 \\
0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & 1 & 1 & 0 & 1 & 1 & 1 & 0 & 0 & 0 & 1 & 0 & 0
\end{bmatrix}
$$

FIG. 10

$$
H12A = \begin{bmatrix}
1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\
1 & -1 & 1 & -1 & 1 & 1 & 1 & -1 & -1 & -1 & 1 & -1 \\
1 & -1 & -1 & 1 & -1 & 1 & 1 & 1 & -1 & -1 & -1 & 1 \\
1 & 1 & -1 & -1 & 1 & -1 & 1 & 1 & 1 & -1 & -1 & -1 \\
1 & -1 & 1 & -1 & -1 & 1 & -1 & 1 & 1 & 1 & -1 & -1 \\
1 & -1 & -1 & 1 & -1 & -1 & 1 & -1 & 1 & 1 & 1 & -1 \\
1 & -1 & -1 & -1 & 1 & -1 & -1 & 1 & -1 & 1 & 1 & 1 \\
1 & 1 & -1 & -1 & -1 & 1 & -1 & -1 & 1 & -1 & 1 & 1 \\
1 & 1 & 1 & -1 & -1 & -1 & 1 & -1 & -1 & 1 & -1 & 1 \\
1 & 1 & 1 & 1 & -1 & -1 & -1 & 1 & -1 & -1 & 1 & -1 \\
1 & -1 & 1 & 1 & 1 & -1 & -1 & -1 & 1 & -1 & -1 & 1 \\
1 & 1 & -1 & 1 & 1 & 1 & -1 & -1 & -1 & 1 & -1 & -1
\end{bmatrix} \Bigg\} P
$$

FIG. 11

$$
H12B = \begin{bmatrix}
1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\
1 & -1 & -1 & 1 & 1 & -1 & 1 & 1 & -1 & -1 & 1 & -1 \\
1 & 1 & -1 & 1 & -1 & -1 & 1 & -1 & 1 & -1 & -1 & 1 \\
1 & 1 & -1 & -1 & -1 & -1 & -1 & 1 & 1 & 1 & 1 & -1 \\
1 & 1 & 1 & -1 & -1 & 1 & 1 & 1 & -1 & -1 & -1 & -1 \\
1 & -1 & 1 & -1 & 1 & -1 & 1 & -1 & 1 & 1 & -1 & -1 \\
1 & -1 & 1 & 1 & -1 & -1 & -1 & 1 & -1 & 1 & -1 & 1 \\
1 & -1 & -1 & -1 & -1 & 1 & -1 & -1 & 1 & 1 & 1 & 1 \\
1 & 1 & 1 & -1 & 1 & -1 & -1 & -1 & -1 & -1 & 1 & 1 \\
1 & -1 & 1 & 1 & -1 & 1 & -1 & -1 & 1 & -1 & 1 & -1 \\
1 & -1 & -1 & -1 & 1 & 1 & -1 & 1 & 1 & -1 & -1 & 1 \\
1 & 1 & -1 & 1 & 1 & 1 & -1 & -1 & -1 & 1 & -1 & -1
\end{bmatrix} \Bigg\} P
$$

FIG. 12

TITLE: TRACK IDENTIFICATION CODEWORDS HAVING MULTIPLE BIT ERROR
CORRECTION CAPABILITY AND GENERALIZED GRAY CODE PROPERTY
INVENTOR: JAI N. SUBRAHMANYAM
ATTY DOCKET NUMBER: K35A1290

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TID	CODEWORD (23,11)																						
49	0	0	0	0	0	1	0	1	0	0	1	1	0	1	1	0	1	1	1	0	1	1	0
50	0	0	0	0	0	1	0	1	0	1	1	0	0	0	0	1	1	1	1	1	1	1	1
D = 7	-	-	-	-	-	-	-	-	-	X	-	X	-	X	X	X	-	-	-	X	-	-	X

FIG.13

TID	CODEWORD (23,11)																						
49	0	0	0	0	0	1	0	1	0	0	1	1	0	1	1	0	1	1	1	0	1	1	0
51	0	0	0	0	0	1	0	1	0	1	0	1	1	0	1	0	0	1	1	1	0	1	1
D = 8	-	-	-	-	-	-	-	-	-	X	X	-	X	X	-	-	X	-	-	X	X	-	X

FIG.14

TID	CODEWORD (23,11)																						
49	0	0	0	0	0	1	0	1	0	0	1	1	0	1	1	0	1	1	1	0	1	1	0
1984	1	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	1	1	1	0	1	0	1
D = 7	X	-	-	-	-	-	-	X	-	-	X	X	-	-	X	-	-	-	-	-	-	X	X

FIG.15

TID	CODEWORD (23,11)																						
1983	1	0	0	0	1	1	0	0	0	0	0	1	0	1	1	0	1	0	1	1	0	1	1
1984	1	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	1	1	1	0	1	0	1
D = 7	-	-	-	-	X	-	-	-	-	-	-	X	-	-	X	-	-	X	-	X	X	X	-

FIG.16

TITLE: TRACK IDENTIFICATION CODEWORDS HAVING MULTIPLE BIT ERROR
CORRECTION CAPABILITY AND GENERALIZED GRAY CODE PROPERTY
INVENTOR: JAI N. SUBRAHMANYAM
ATTY DOCKET NUMBER: K35A1290

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TID	CODEWORD (23,11)
0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
1	0 0 0 0 0 0 0 0 0 1 1 1 0 1 1 1 0 0 0 1 0 0
2	0 0 0 0 0 0 0 0 1 1 0 1 1 0 0 1 0 0 1 1 0 1
3	0 0 0 0 0 0 0 0 1 0 1 0 1 1 1 0 0 0 1 0 0 1
4	0 0 0 0 0 0 0 1 1 0 0 1 0 0 1 0 0 1 1 0 1 1
5	0 0 0 0 0 0 0 1 1 1 1 0 0 1 0 1 0 1 1 1 1 1
6	0 0 0 0 0 0 0 1 0 1 0 0 1 0 1 1 0 1 0 1 1 0
7	0 0 0 0 0 0 0 1 0 0 1 1 1 1 0 0 0 1 0 0 1 0
8	0 0 0 0 0 0 1 1 0 0 0 0 1 0 0 1 1 0 1 1 1
9	0 0 0 0 0 0 1 1 0 1 1 1 0 0 1 1 1 1 0 0 1 1
10	0 0 0 0 0 0 1 1 1 0 1 1 1 0 1 1 1 1 0 1 0
11	0 0 0 0 0 0 1 1 1 0 1 0 1 0 1 0 1 1 1 1 1 0
12	0 0 0 0 0 0 1 0 1 0 0 1 0 1 1 0 1 0 1 1 0 0
13	0 0 0 0 0 0 1 0 1 1 1 0 0 0 0 1 1 0 1 0 0 0
14	0 0 0 0 0 0 1 0 0 1 0 0 1 1 1 1 1 0 0 0 0 1
15	0 0 0 0 0 0 1 0 0 0 1 1 1 0 0 0 1 0 0 1 0 1
16	0 0 0 0 0 1 1 0 0 0 0 0 1 0 0 1 1 0 1 1 1 0
17	0 0 0 0 0 1 1 0 0 1 1 1 1 1 0 1 0 1 0 1 0
18	0 0 0 0 0 1 1 0 1 1 0 1 0 0 0 0 1 0 0 0 1 1
19	0 0 0 0 0 1 1 0 1 0 1 0 0 1 1 1 1 0 0 1 1 1
20	0 0 0 0 0 1 1 1 0 0 1 1 0 1 1 1 1 0 1 0 1
21	0 0 0 0 0 1 1 1 1 1 0 1 1 0 0 1 1 0 0 0 1
22	0 0 0 0 0 1 1 1 0 1 0 0 0 0 1 0 1 1 1 0 0 0
23	0 0 0 0 0 1 1 1 0 0 1 1 0 1 0 1 1 1 1 1 0 0
24	0 0 0 0 0 1 0 1 0 0 0 0 1 1 0 1 0 1 1 0 0 1
25	0 0 0 0 0 1 0 1 0 1 1 1 1 0 1 0 0 1 1 1 0 1
26	0 0 0 0 0 1 0 1 1 1 0 1 0 0 0 1 0 0 1 0 0
27	0 0 0 0 0 1 0 1 1 0 1 0 0 0 1 1 0 1 0 0 0 0
28	0 0 0 0 0 1 0 0 1 0 0 1 1 1 1 1 0 0 0 0 1 0
29	0 0 0 0 0 1 0 0 1 1 1 0 1 0 0 0 0 0 0 1 1 0
30	0 0 0 0 0 1 0 0 0 1 0 0 0 1 1 0 0 0 1 1 1 1
31	0 0 0 0 0 1 0 0 0 0 1 1 0 0 0 1 0 0 1 0 1 1
32	0 0 0 0 1 1 0 0 0 0 0 1 0 0 1 1 0 1 1 1 0 0
33	0 0 0 0 1 1 0 0 0 1 1 0 0 1 0 0 0 1 1 0 0 0
34	0 0 0 0 1 1 0 0 1 1 0 0 1 0 1 0 0 1 0 0 0 1
35	0 0 0 0 1 1 0 0 1 0 1 1 1 1 0 1 0 1 0 1 0 1
36	0 0 0 0 1 1 0 1 1 0 0 0 0 0 1 0 0 0 1 0 0 1
37	0 0 0 0 1 1 0 1 1 1 1 1 0 1 1 0 0 0 0 0 1 1
38	0 0 0 0 1 1 0 1 0 1 0 1 1 0 0 0 0 0 1 0 1 0
39	0 0 0 0 1 1 0 1 0 0 1 0 1 1 1 1 0 0 1 1 1 0
40	0 0 0 0 1 1 1 0 0 0 1 0 1 1 1 1 0 1 0 1 1
41	0 0 0 0 1 1 1 0 1 1 0 0 0 0 1 0 1 1 1 1
42	0 0 0 0 1 1 1 1 1 0 0 1 1 1 0 1 0 0 1 1 0
43	0 0 0 0 1 1 1 1 1 0 1 1 1 0 0 1 1 0 0 0 1 0
44	0 0 0 0 1 1 1 0 1 0 0 0 0 1 0 1 1 1 0 0 0 0
45	0 0 0 0 1 1 1 0 1 1 1 1 0 0 1 0 1 1 0 1 0 0
46	0 0 0 0 1 1 1 0 0 1 0 1 1 0 1 1 1 1 1 0 1
47	0 0 0 0 1 1 1 0 0 1 0 1 0 1 0 1 1 1 1 0 0 1
48	0 0 0 0 1 0 1 0 0 0 0 1 1 0 1 0 1 1 0 0 1 0
49	0 0 0 0 1 0 1 0 0 1 1 0 1 1 0 1 1 1 0 1 1 0

FIG.17A

TID	CODEWORD (23,11)
50	0 0 0 0 1 0 1 0 1 1 0 0 0 0 1 1 1 1 1 1 1 1
51	0 0 0 0 1 0 1 0 1 0 1 1 0 1 0 0 1 1 1 0 1 1
52	0 0 0 0 1 0 1 1 1 0 0 0 1 0 0 0 1 0 1 0 0 1
53	0 0 0 0 1 0 1 1 1 1 1 1 1 1 1 1 1 0 1 1 0 1
54	0 0 0 0 1 0 1 1 0 1 0 1 0 0 0 1 1 0 0 1 0 0
55	0 0 0 0 1 0 1 1 0 0 1 0 0 1 1 0 1 0 0 0 0 0
56	0 0 0 0 1 0 0 1 0 0 0 1 1 1 1 0 0 0 0 1 0 1
57	0 0 0 0 1 0 0 1 0 1 0 1 1 0 1 0 0 1 0 0 0 0 1
58	0 0 0 0 1 0 0 1 1 1 0 0 0 1 1 1 0 0 1 0 0 0
59	0 0 0 0 1 0 0 1 1 0 1 1 0 0 0 0 0 1 1 0 0
60	0 0 0 0 1 0 0 0 1 0 0 0 1 1 0 0 0 1 1 1 1 0
61	0 0 0 0 1 0 0 0 1 1 1 1 0 1 1 0 1 1 0 1 0
62	0 0 0 0 1 0 0 0 0 1 0 1 0 1 0 1 0 0 1 1
63	0 0 0 0 1 0 0 0 0 1 0 0 0 1 0 0 1 0 1 1 1
64	0 0 0 1 1 0 0 0 0 0 0 0 1 1 0 1 1 1 0 0 1
65	0 0 0 1 1 0 0 0 0 1 1 1 0 0 0 1 1 1 1 1 0 1
66	0 0 0 1 1 0 0 0 1 1 0 1 1 1 1 1 1 1 0 1 0 0
67	0 0 0 1 1 0 0 0 1 0 1 0 1 0 0 0 1 1 0 0 0 0
68	0 0 0 1 1 0 0 1 1 0 0 1 0 1 0 0 1 0 0 0 1 0
69	0 0 0 1 1 0 0 1 1 1 1 0 0 0 1 1 1 0 0 1 1 0
70	0 0 0 1 1 0 0 1 0 1 0 0 1 1 0 1 1 0 1 1 1 1
71	0 0 0 1 1 0 0 1 0 0 1 1 1 0 1 0 1 0 1 0 1 1
72	0 0 0 1 1 0 1 1 0 0 0 0 0 1 0 0 0 1 1 1 0
73	0 0 0 1 1 0 1 1 0 1 1 1 0 1 0 1 0 0 1 0 1 0
74	0 0 0 1 1 0 1 1 1 1 0 1 1 0 1 1 0 0 0 0 1 1
75	0 0 0 1 1 0 1 1 1 0 1 0 1 1 0 0 0 0 0 1 1 1
76	0 0 0 1 1 0 1 0 1 0 0 1 0 0 0 0 0 1 0 1 0 1
77	0 0 0 1 1 0 1 0 1 1 1 0 0 1 1 1 0 1 0 0 0 1
78	0 0 0 1 1 0 1 0 0 1 0 0 1 0 0 1 0 1 1 0 0 0
79	0 0 0 1 1 0 1 0 0 0 1 1 1 1 1 0 0 1 1 1 0 0
80	0 0 0 1 1 1 1 0 0 0 0 0 1 1 1 1 0 1 0 1 1 1
81	0 0 0 1 1 1 1 0 0 1 1 1 1 0 0 0 0 1 0 0 1 1
82	0 0 0 1 1 1 1 0 1 1 0 1 0 1 1 0 0 1 1 0 1 0
83	0 0 0 1 1 1 1 0 1 0 1 0 0 0 0 1 0 1 1 1 1 0
84	0 0 0 1 1 1 1 1 0 0 1 1 1 0 1 0 0 1 1 0 0
85	0 0 0 1 1 1 1 1 1 1 0 1 0 1 0 0 0 1 0 0 0
86	0 0 0 1 1 1 1 1 0 1 0 0 0 1 0 0 0 0 0 0 0 1
87	0 0 0 1 1 1 1 1 0 0 1 1 0 0 1 1 0 0 0 1 0 1
88	0 0 0 1 1 1 0 1 0 0 0 1 0 1 1 1 0 0 0 0 0
89	0 0 0 1 1 1 0 1 0 1 1 1 1 1 0 0 1 0 0 1 0 0
90	0 0 0 1 1 1 0 1 1 1 0 1 0 0 1 0 1 0 1 1 0 1
91	0 0 0 1 1 1 0 1 1 0 1 0 0 1 0 1 1 0 1 0 0 1
92	0 0 0 1 1 1 0 0 1 0 0 1 1 0 0 1 1 1 1 0 1 1
93	0 0 0 1 1 1 0 0 1 1 1 0 1 1 1 0 1 1 1 1 1 1
94	0 0 0 1 1 1 0 0 0 1 0 0 0 0 0 0 1 1 0 1 1 0
95	0 0 0 1 1 1 0 0 0 0 1 1 0 1 1 1 1 1 0 0 1 0
96	0 0 0 1 0 1 0 0 0 0 0 1 0 1 0 1 1 0 0 1 0 1
97	0 0 0 1 0 1 0 0 0 1 1 0 0 1 0 1 0 1 0 0 0 0 1
98	0 0 0 1 0 1 0 0 1 1 0 0 1 1 0 0 1 0 1 0 0 0
99	0 0 0 1 0 1 0 0 1 0 1 1 1 0 1 1 1 0 1 1 0 0

FIG.17B

TITLE: TRACK IDENTIFICATION CODEWORDS HAVING MULTIPLE BIT ERROR
CORRECTION CAPABILITY AND GENERALIZED GRAY CODE PROPERTY
INVENTOR: JAI N. SUBRAHMANYAM
ATTY DOCKET NUMBER: K35A1290

10/30

TID	CODEWORD (23,11)
100	0 0 0 0 1 0 1 0 1 1 0 0 0 0 1 1 1 1 1 1 1 1 0
101	0 0 0 0 1 0 1 0 1 1 1 1 0 0 0 0 1 1 1 0 1 0
102	0 0 0 0 1 0 1 0 1 0 1 0 1 1 1 1 0 1 1 0 0 1 1
103	0 0 0 0 1 0 1 0 1 0 0 1 0 1 0 0 1 1 1 0 1 1 1
104	0 0 0 0 1 0 1 1 1 0 0 0 1 0 0 0 1 0 1 0 0 1 0
105	0 0 0 0 1 0 1 1 1 0 1 1 0 0 1 1 0 0 1 0 1 1 0
106	0 0 0 0 1 0 1 1 1 1 1 0 0 1 0 0 0 0 1 1 1 1
107	0 0 0 0 1 0 1 1 1 0 1 1 1 1 1 1 0 1 1 0 1 1
108	0 0 0 0 1 0 1 1 0 1 0 0 0 0 1 1 0 0 1 0 0 1
109	0 0 0 0 1 0 1 1 0 1 1 1 1 0 1 0 0 0 0 1 1 0 1
110	0 0 0 0 1 0 1 1 0 0 1 0 1 1 0 1 0 0 0 0 1 0 0
111	0 0 0 0 1 0 1 1 0 0 0 1 0 1 1 0 1 0 0 0 0 0 0
112	0 0 0 0 1 0 0 1 0 0 0 0 1 1 1 0 0 0 0 1 0 1 1
113	0 0 0 0 1 0 0 1 0 0 1 1 0 1 0 1 1 0 0 1 1 1 1
114	0 0 0 0 1 0 0 1 0 1 1 0 0 0 1 0 1 0 0 0 1 1 0
115	0 0 0 0 1 0 0 1 0 1 0 1 1 0 0 1 0 0 0 0 0 1 0
116	0 0 0 0 1 0 0 1 1 1 0 0 0 1 1 1 0 0 1 0 0 0 0
117	0 0 0 0 1 0 0 1 1 1 1 1 1 1 0 0 1 0 1 0 0 1 0 0
118	0 0 0 0 1 0 0 1 1 0 1 0 1 0 1 1 1 0 1 1 1 0 1
119	0 0 0 0 1 0 0 1 1 0 0 1 0 0 0 0 0 0 1 1 0 0 1
120	0 0 0 0 1 0 0 0 1 0 0 0 1 1 0 0 0 1 1 1 1 0 0
121	0 0 0 0 1 0 0 0 1 0 1 1 0 1 1 1 1 1 1 0 0 0
122	0 0 0 0 1 0 0 0 1 1 1 0 0 0 0 1 1 1 0 0 0 1
123	0 0 0 0 1 0 0 0 1 1 0 1 1 0 1 1 0 1 1 0 1 0 1
124	0 0 0 0 1 0 0 0 0 1 0 0 0 1 0 1 0 1 0 0 1 1 1
125	0 0 0 0 1 0 0 0 0 1 1 1 1 1 1 0 1 1 0 0 0 1 1
126	0 0 0 0 1 0 0 0 0 0 1 0 0 1 0 0 1 1 1 0 1 0 1 0
127	0 0 0 0 1 0 0 0 0 0 1 0 0 1 0 0 1 0 1 0 1 1 1 0
128	0 0 0 1 1 0 0 0 0 0 0 0 1 1 0 1 1 1 0 0 1 0
129	0 0 0 1 1 0 0 0 0 1 1 1 1 0 1 0 1 1 0 1 1 0
130	0 0 0 1 1 0 0 0 0 1 1 0 1 0 1 0 0 1 1 1 1 1 1
131	0 0 0 1 1 0 0 0 0 1 0 1 0 0 0 1 1 1 1 1 0 1 1
132	0 0 0 1 1 0 0 0 1 1 0 0 1 1 1 1 1 1 0 1 0 0 1
133	0 0 0 1 1 0 0 0 1 1 1 1 0 1 0 0 0 0 1 0 1 1 0 1
134	0 0 0 1 1 0 0 0 1 0 1 0 0 0 1 1 0 1 0 0 1 0 0
135	0 0 0 1 1 0 0 0 1 0 0 1 1 0 0 0 1 1 0 0 0 0 0
136	0 0 0 1 1 0 0 1 1 0 0 0 0 0 1 0 0 1 0 0 0 1 0 1
137	0 0 0 1 1 0 0 1 1 0 1 1 1 1 1 0 0 0 0 0 0 1
138	0 0 0 1 1 0 0 1 1 1 1 0 1 0 0 0 0 0 0 1 0 0 0
139	0 0 0 1 1 0 0 1 1 1 0 1 0 0 1 1 1 0 0 1 1 0 0
140	0 0 0 1 1 0 0 1 0 1 0 0 1 1 0 1 1 0 1 1 1 1 0
141	0 0 0 1 1 0 0 1 0 1 1 1 0 1 1 0 0 0 1 1 0 1 0
142	0 0 0 1 1 0 0 1 0 0 1 0 0 0 0 1 0 0 1 0 0 1 1
143	0 0 0 1 1 0 0 1 0 0 0 1 1 0 1 0 1 0 1 0 1 1 1
144	0 0 0 1 1 0 1 1 0 0 0 0 0 0 1 0 0 0 1 1 1 0 0
145	0 0 0 1 1 0 1 1 0 0 1 1 1 0 0 1 1 0 1 1 0 0 0
146	0 0 0 1 1 0 1 1 0 0 1 1 0 1 0 0 1 0 1 0 0 0 1
147	0 0 0 1 1 0 1 1 0 1 0 1 0 1 0 0 1 0 1 0 0 1 0
148	0 0 0 1 1 0 1 1 1 1 0 0 1 0 1 1 0 0 0 0 1 1 1
149	0 0 0 1 1 0 1 1 1 1 1 1 0 0 0 0 1 0 0 0 0 1 1

FIG.17C

TID	CODEWORD (23,11)
150	0 0 0 1 1 0 1 1 1 0 1 0 0 1 1 1 1 0 0 1 0 1 0
151	0 0 0 1 1 0 1 1 1 0 0 1 1 1 0 0 0 0 0 1 1 1 0
152	0 0 0 1 1 0 1 0 1 0 0 0 0 0 0 0 1 0 1 0 1 1
153	0 0 0 1 1 0 1 0 1 0 1 1 1 0 1 1 1 1 0 1 1 1 1
154	0 0 0 1 1 0 1 0 1 1 1 0 1 1 0 0 1 1 0 0 1 1 0
155	0 0 0 1 1 0 1 0 1 1 0 1 0 1 1 1 0 1 0 0 0 1 0
156	0 0 0 1 1 0 1 0 0 1 0 0 1 0 0 1 0 1 1 0 0 0 0
157	0 0 0 1 1 0 1 0 0 1 1 1 0 0 1 0 1 1 1 0 1 0 0
158	0 0 0 1 1 0 1 0 0 0 1 0 0 1 0 1 0 1 1 1 1 1 0 1
159	0 0 0 1 1 0 1 0 0 0 0 1 1 1 0 0 1 1 1 0 0 1
160	0 0 0 1 1 1 0 0 0 0 0 1 1 1 1 0 1 0 1 1 1 0
161	0 0 0 1 1 1 0 0 0 1 1 0 1 0 0 1 1 0 1 0 1 0
162	0 0 0 1 1 1 0 0 1 1 0 0 0 1 1 1 1 0 0 0 1 1
163	0 0 0 1 1 1 0 0 1 0 1 1 0 0 0 0 1 0 0 1 1 1
164	0 0 0 1 1 1 0 1 1 0 0 0 1 1 0 0 1 1 0 1 0 1
165	0 0 0 1 1 1 0 1 1 1 1 1 1 0 1 1 1 1 0 0 0 1
166	0 0 0 1 1 1 0 1 0 1 0 1 0 1 0 1 0 1 1 1 0 0 0
167	0 0 0 1 1 1 0 1 0 0 0 1 0 0 0 1 0 1 1 1 1 0 0
168	0 0 0 1 1 1 1 0 0 0 1 1 0 1 0 0 1 0 1 1 0 0
169	0 0 0 1 1 1 1 0 1 1 0 1 1 0 1 0 1 0 1 1 0 1
170	0 0 0 1 1 1 1 1 1 1 0 0 0 0 1 1 0 1 0 1 0 0
171	0 0 0 1 1 1 1 1 1 0 1 1 0 1 0 0 0 1 0 0 0 0
172	0 0 0 1 1 1 1 0 1 0 0 0 1 0 0 0 0 0 0 0 1 0
173	0 0 0 1 1 1 1 0 1 1 1 1 1 1 1 0 0 0 1 1 0
174	0 0 0 1 1 1 1 0 0 1 0 1 0 0 0 1 0 0 1 1 1 1
175	0 0 0 1 1 1 1 0 0 0 1 0 0 1 1 0 0 0 1 0 1 1
176	0 0 0 1 1 1 0 1 0 0 0 0 1 0 1 1 1 0 0 0 0 0 0
177	0 0 0 1 1 1 0 1 0 0 1 0 0 1 0 0 0 0 0 0 1 0 0
178	0 0 0 1 1 1 0 1 0 1 1 0 0 1 1 1 0 0 0 1 1 0 1
179	0 0 0 1 1 1 0 1 0 1 0 1 1 1 0 0 1 0 0 1 0 0 1
180	0 0 0 1 1 1 0 1 1 1 0 0 0 0 1 0 1 0 1 1 0 1 1
181	0 0 0 1 1 1 0 1 1 1 1 1 1 0 0 1 0 0 1 1 1 1 1
182	0 0 0 1 1 1 0 1 1 0 1 0 1 1 1 0 0 0 1 0 1 1 0
183	0 0 0 1 1 1 0 1 1 0 0 1 0 1 0 1 1 0 1 0 0 1 0
184	0 0 0 1 1 1 0 0 1 0 0 0 1 0 0 1 1 1 1 0 1 1 1
185	0 0 0 1 1 1 0 0 1 0 1 1 0 0 1 0 0 1 1 0 0 1 1
186	0 0 0 1 1 1 0 0 1 1 1 0 0 1 0 1 0 1 1 1 0 1 0
187	0 0 0 1 1 1 0 0 1 1 0 1 1 1 1 0 1 1 1 1 1 1 0
188	0 0 0 1 1 1 0 0 0 1 1 1 0 1 1 0 1 0 1 1 0 0
189	0 0 0 1 1 1 0 0 0 1 1 1 0 1 1 0 1 0 1 0 0 1 0
190	0 0 0 1 1 1 0 0 0 0 1 0 1 1 0 0 0 1 0 0 0 0 1
191	0 0 0 1 1 1 0 0 0 0 0 1 0 1 1 1 1 1 0 0 1 0 1
192	0 0 0 1 0 1 0 0 0 0 0 0 1 0 1 1 0 0 1 0 1 1
193	0 0 0 1 0 1 0 0 0 0 1 1 1 1 1 0 0 0 0 1 1 1 1
194	0 0 0 1 0 1 0 0 0 1 1 0 1 0 0 1 0 0 0 0 1 1 0
195	0 0 0 1 0 1 0 0 0 1 0 1 0 0 1 0 1 0 0 0 0 1 0
196	0 0 0 1 0 1 0 0 1 1 0 0 1 1 0 0 1 0 1 0 0 0 0
197	0 0 0 1 0 1 0 0 1 1 1 1 0 1 1 1 0 0 1 0 1 0 0
198	0 0 0 1 0 1 0 0 1 0 1 0 0 0 0 0 0 0 1 1 1 0 1
199	0 0 0 1 0 1 0 0 1 0 0 1 1 0 1 1 1 0 1 1 0 0 1

FIG.17D

TITLE: TRACK IDENTIFICATION CODEWORDS HAVING MULTIPLE BIT ERROR
CORRECTION CAPABILITY AND GENERALIZED GRAY CODE PROPERTY
INVENTOR: JAI N. SUBRAHMANYAM
ATTY DOCKET NUMBER: K35A1290

11/30

TID	CODEWORD (23,11)
200	0 0 0 1 0 1 0 1 1 0 0 0 0 1 1 1 1 1 1 1 1 0 0
201	0 0 0 1 0 1 0 1 1 0 1 1 1 1 0 0 0 1 1 1 0 0 0
202	0 0 0 1 0 1 0 1 1 1 1 0 1 0 1 1 0 1 1 0 0 0 1
203	0 0 0 1 0 1 0 1 1 1 0 1 0 0 0 0 1 1 1 0 1 0 1
204	0 0 0 1 0 1 0 1 0 1 0 0 1 1 1 0 1 1 0 0 1 1 1
205	0 0 0 1 0 1 0 1 0 1 1 1 0 1 0 1 0 1 0 0 0 1 1
206	0 0 0 1 0 1 0 1 0 0 1 0 0 0 1 0 0 1 0 1 0 1 0
207	0 0 0 1 0 1 0 1 0 0 0 1 1 0 0 1 1 1 0 1 1 1 0
208	0 0 0 1 0 1 1 1 0 0 0 0 0 0 1 0 1 0 0 1 0 1
209	0 0 0 1 0 1 1 1 0 0 1 1 1 0 1 0 1 1 0 0 0 0 1
210	0 0 0 1 0 1 1 1 0 1 1 0 1 1 0 1 1 1 0 1 0 0 0
211	0 0 0 1 0 1 1 1 0 1 0 1 0 1 1 0 0 1 0 1 1 0 0
212	0 0 0 1 0 1 1 1 1 1 0 0 1 0 0 0 0 1 1 1 1 1 0
213	0 0 0 1 0 1 1 1 1 1 1 1 0 0 1 1 1 1 1 1 0 1 0
214	0 0 0 1 0 1 1 1 1 1 0 1 0 0 1 0 0 1 1 1 0 0 1 1
215	0 0 0 1 0 1 1 1 1 0 0 1 1 1 1 1 0 1 1 0 1 1 1
216	0 0 0 1 0 1 1 0 1 0 0 0 0 0 1 1 0 0 1 0 0 1 0
217	0 0 0 1 0 1 1 0 1 0 1 1 1 0 0 0 1 0 1 0 1 1 0
218	0 0 0 1 0 1 1 0 1 1 1 0 1 1 1 1 1 0 1 1 1 1 1
219	0 0 0 1 0 1 1 0 1 1 0 1 0 1 0 0 0 0 1 1 0 1 1
220	0 0 0 1 0 1 1 0 0 1 0 0 1 0 1 0 0 0 0 1 0 0 1
221	0 0 0 1 0 1 1 0 0 1 1 1 0 0 0 1 1 0 0 1 1 0 1
222	0 0 0 1 0 1 1 0 0 0 1 0 0 1 1 0 1 0 0 0 1 0 0
223	0 0 0 1 0 1 1 0 0 0 1 1 1 0 1 0 0 0 0 0 0 0
224	0 0 0 1 0 0 1 0 0 0 0 0 1 1 0 0 0 0 1 0 1 1 1
225	0 0 0 1 0 0 1 0 0 0 1 1 0 1 1 1 1 0 1 0 0 1 1
226	0 0 0 1 0 0 1 0 0 1 1 0 0 0 0 0 1 0 1 1 0 1 0
227	0 0 0 1 0 0 1 0 0 1 0 1 1 0 1 1 0 0 1 1 1 1 0
228	0 0 0 1 0 0 1 0 1 1 0 0 0 1 0 1 0 0 0 1 1 0 0
229	0 0 0 1 0 0 1 0 1 1 1 1 1 1 0 1 0 0 1 0 0 0
230	0 0 0 1 0 0 1 0 1 0 1 0 1 0 0 1 1 0 0 0 0 0 1
231	0 0 0 1 0 0 1 0 1 0 0 1 0 0 1 0 0 0 0 0 1 0 1
232	0 0 0 1 0 0 1 1 1 0 0 0 1 1 1 0 0 1 0 0 0 0 0
233	0 0 0 1 0 0 1 1 1 0 1 1 0 1 0 1 1 1 0 0 1 0 0
234	0 0 0 1 0 0 1 1 1 1 1 0 0 0 1 0 1 1 0 1 1 0 1
235	0 0 0 1 0 0 1 1 1 1 0 1 1 0 0 1 0 1 0 1 0 0 1
236	0 0 0 1 0 0 1 1 0 1 0 0 0 1 1 1 0 1 1 1 0 1 1
237	0 0 0 1 0 0 1 1 0 1 1 1 1 1 0 0 1 1 1 1 1 1 1
238	0 0 0 1 0 0 1 1 0 0 1 0 1 0 1 1 1 1 1 0 1 1 0
239	0 0 0 1 0 0 1 1 0 0 0 1 0 0 0 0 1 1 0 0 1 0
240	0 0 0 1 0 0 0 1 0 0 0 0 1 0 0 0 1 1 1 1 0 0 1
241	0 0 0 1 0 0 0 1 0 0 1 1 0 0 1 1 0 1 1 1 1 0 1
242	0 0 0 1 0 0 0 1 0 1 1 0 0 1 0 0 0 1 1 0 1 0 0
243	0 0 0 1 0 0 0 1 0 1 0 1 1 1 1 1 1 1 0 0 0 0
244	0 0 0 1 0 0 0 1 1 1 0 0 0 0 1 1 1 0 0 0 1 0
245	0 0 0 1 0 0 0 1 1 1 1 1 1 0 0 1 0 0 1 0 1 0
246	0 0 0 1 0 0 0 1 1 0 1 1 0 1 0 1 0 1 0 1 1 1 1
247	0 0 0 1 0 0 0 1 1 0 0 1 0 1 1 0 1 1 0 1 0 1 1
248	0 0 0 1 0 0 0 0 1 0 0 0 1 0 1 0 1 0 0 1 1 1 0
249	0 0 0 1 0 0 0 0 1 0 1 1 0 0 0 1 0 0 0 1 0 1 0

FIG.17E

TID	CODEWORD (23,11)
250	0 0 0 1 0 0 0 0 1 1 1 0 0 1 1 0 0 0 0 0 0 1 1
251	0 0 0 1 0 0 0 0 1 1 0 1 1 1 0 1 1 0 0 0 1 1 1
252	0 0 0 1 0 0 0 0 1 0 0 0 0 1 1 1 0 1 0 1 0 1
253	0 0 0 1 0 0 0 0 1 1 1 1 0 0 0 0 0 1 0 0 0 1
254	0 0 0 1 0 0 0 0 0 1 0 1 1 1 1 0 0 1 1 0 0 0
255	0 0 0 1 0 0 0 0 0 0 1 0 1 0 0 1 0 1 1 1 0 0
256	0 0 1 1 0 0 0 0 0 0 0 1 1 0 1 1 1 0 0 1 0 0
257	0 0 1 1 0 0 0 0 0 1 1 0 1 1 0 0 1 0 1 0 0 1
258	0 0 1 1 0 0 0 0 1 1 0 0 0 1 0 1 0 1 0 0 1
259	0 0 1 1 0 0 0 0 1 0 1 1 0 1 0 1 1 0 1 1 0 1
260	0 0 1 1 0 0 0 0 1 1 0 0 0 1 0 0 1 1 1 1 1 1 1
261	0 0 1 1 0 0 0 0 1 1 1 1 1 1 1 0 1 1 1 0 1 1
262	0 0 1 1 0 0 0 0 1 0 1 0 1 0 0 0 0 1 1 0 0 1 0
263	0 0 1 1 0 0 0 0 1 0 0 1 0 0 1 1 1 1 1 0 1 1 0
264	0 0 1 1 0 0 0 1 1 0 0 0 1 1 1 1 1 0 1 0 0 1 1
265	0 0 1 1 0 0 1 1 0 1 1 0 1 0 0 0 0 1 0 1 1 1
266	0 0 1 1 0 0 0 1 1 1 1 0 0 0 1 1 0 0 1 1 1 1 0
267	0 0 1 1 0 0 0 1 1 1 0 1 1 0 0 0 1 0 1 1 0 1 0
268	0 0 1 1 0 0 0 1 0 1 0 0 0 1 1 0 1 0 0 1 0 0 0
269	0 0 1 1 0 0 0 1 0 1 1 1 1 0 1 0 0 0 1 1 0 0
270	0 0 1 1 0 0 0 1 0 0 1 0 1 0 1 0 0 0 0 0 1 0 1
271	0 0 1 1 0 0 0 1 0 0 0 1 0 0 0 1 1 0 0 0 0 0 1
272	0 0 1 1 0 0 1 1 0 0 0 0 1 0 0 1 0 0 0 1 0 1 0
273	0 0 1 1 0 0 1 1 0 0 1 1 0 0 1 0 1 0 0 1 1 1 0
274	0 0 1 1 0 0 1 1 0 1 1 0 0 1 0 1 1 0 0 0 1 1 1
275	0 0 1 1 0 0 1 1 0 1 0 1 1 1 1 0 0 0 0 0 0 1 1
276	0 0 1 1 0 0 1 1 1 1 0 0 0 0 0 0 1 0 0 0 1
277	0 0 1 1 0 0 1 1 1 1 1 1 0 1 1 0 1 0 1 0 1 0 1
278	0 0 1 1 0 0 1 1 1 0 1 0 1 1 0 0 1 0 1 1 1 0 0
279	0 0 1 1 0 0 1 1 1 0 0 1 0 1 1 1 0 0 1 1 0 0 0
280	0 0 1 1 0 0 1 0 1 0 0 0 1 0 1 1 0 1 1 1 1 0 1
281	0 0 1 1 0 0 1 0 1 0 1 1 0 0 0 1 1 1 1 0 0 1
282	0 0 1 1 0 0 1 0 1 1 1 0 0 1 1 1 1 1 1 0 0 0 0
283	0 0 1 1 0 0 1 0 1 1 0 1 1 1 0 0 0 1 1 0 1 0 0
284	0 0 1 1 0 0 1 0 0 1 0 0 0 0 1 0 0 1 0 0 1 1 0
285	0 0 1 1 0 0 1 0 0 1 1 1 1 0 0 1 1 1 0 0 0 1 0
286	0 0 1 1 0 0 1 0 0 0 1 0 1 1 1 0 1 1 0 1 0 1 1
287	0 0 1 1 0 0 1 0 0 0 1 0 1 0 1 0 1 0 1 1 1 1
288	0 0 1 1 0 1 1 0 0 0 0 0 1 0 0 0 1 1 1 0 0 0
289	0 0 1 1 0 1 1 0 0 0 1 1 1 1 1 1 1 1 1 1 0 0
290	0 0 1 1 0 1 1 0 0 1 1 0 1 0 0 0 1 1 1 0 1 0 1
291	0 0 1 1 0 1 1 0 0 1 0 1 0 0 1 1 0 1 1 0 0 0 1
292	0 0 1 1 0 1 1 0 1 1 0 0 1 1 0 1 0 1 0 0 0 1 1
293	0 0 1 1 0 1 1 0 1 1 1 1 0 1 1 0 1 1 1 0 0 1 1 1
294	0 0 1 1 0 1 1 0 1 0 1 0 0 0 0 1 1 1 1 0 1 1 1 0
295	0 0 1 1 0 1 1 0 1 0 0 1 1 0 1 0 0 1 0 1 0 1 0
296	0 0 1 1 0 1 1 1 1 0 0 0 0 1 1 0 0 0 0 1 1 1 1
297	0 0 1 1 0 1 1 1 1 0 1 1 1 1 0 1 1 0 0 1 0 1 1
298	0 0 1 1 0 1 1 1 1 1 1 0 1 0 1 0 1 0 0 0 0 1 0
299	0 0 1 1 0 1 1 1 1 0 1 0 0 0 1 0 0 0 0 1 1 0

FIG.17F

TITLE: TRACK IDENTIFICATION CODEWORDS HAVING MULTIPLE BIT ERROR
CORRECTION CAPABILITY AND GENERALIZED GRAY CODE PROPERTY
INVENTOR: JAI N. SUBRAHMANYAM
ATTY DOCKET NUMBER: K35A1290

12/30

TID	CODEWORD (23,11)
300	0 0 1 1 0 1 1 1 0 1 0 0 1 1 1 1 0 0 1 0 1 0 0
301	0 0 1 1 0 1 1 1 0 1 1 1 0 1 0 0 1 0 1 0 0 0 0
302	0 0 1 1 0 1 1 1 0 0 1 0 0 0 1 1 1 0 1 1 0 0 1
303	0 0 1 1 0 1 1 1 0 0 0 1 1 0 0 0 0 0 1 1 1 0 1
304	0 0 1 1 0 1 0 1 0 0 0 0 0 0 0 0 1 0 1 0 1 1 0
305	0 0 1 1 0 1 0 1 0 0 1 1 1 0 1 1 0 0 1 0 0 1 0
306	0 0 1 1 0 1 0 1 0 1 1 0 1 1 0 0 0 0 1 1 0 1 1
307	0 0 1 1 0 1 0 1 0 1 0 1 0 1 1 1 1 0 1 1 1 1 1
308	0 0 1 1 0 1 0 1 1 0 0 1 0 0 1 1 0 0 1 1 0 1 0
309	0 0 1 1 0 1 0 1 1 1 1 1 0 0 1 0 0 0 0 1 0 0 1
310	0 0 1 1 0 1 0 1 1 0 1 0 0 1 0 1 0 0 0 0 0 0 0
311	0 0 1 1 0 1 0 1 1 0 0 1 1 1 1 0 1 0 0 0 1 0 0
312	0 0 1 1 0 1 0 0 1 0 0 0 0 0 1 0 1 1 0 0 0 0 1
313	0 0 1 1 0 1 0 0 1 0 1 1 1 0 0 1 0 1 0 0 1 0 1
314	0 0 1 1 0 1 0 0 1 1 1 0 1 1 1 0 0 1 0 1 1 0 0
315	0 0 1 1 0 1 0 0 1 1 0 1 0 1 0 1 1 1 0 1 0 0 0
316	0 0 1 1 0 1 0 0 0 1 0 0 1 0 1 1 1 1 1 0 1 0
317	0 0 1 1 0 1 0 0 0 0 1 1 1 0 0 0 0 1 1 1 1 1 0
318	0 0 1 1 0 1 0 0 0 0 0 1 0 0 1 1 1 0 1 1 0 1 1
319	0 0 1 1 0 1 0 0 0 0 1 1 1 0 0 1 1 1 0 0 1 1
320	0 0 1 1 1 1 0 0 0 0 0 1 1 1 0 1 0 1 1 1 0 1
321	0 0 1 1 1 1 0 0 0 0 1 1 0 1 0 1 0 0 1 1 0 0 1
322	0 0 1 1 1 1 0 0 0 1 1 0 0 0 1 0 0 0 1 0 0 0 0
323	0 0 1 1 1 1 0 0 0 1 0 1 1 0 0 1 1 0 1 0 1 0 0
324	0 0 1 1 1 1 0 0 1 1 0 0 0 1 1 1 1 0 0 0 1 1 0
325	0 0 1 1 1 1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 0 1 0
326	0 0 1 1 1 1 0 0 1 0 1 0 1 1 0 1 1 0 0 0 1 0 1
327	0 0 1 1 1 1 0 0 1 0 0 1 0 0 0 0 1 0 0 1 1 1 1
328	0 0 1 1 1 1 0 1 1 0 0 0 1 1 0 0 1 1 0 1 0 1 0
329	0 0 1 1 1 1 0 1 1 0 1 1 0 1 1 1 0 1 0 1 1 1 0
330	0 0 1 1 1 1 0 1 1 1 1 0 0 0 0 0 0 1 0 0 1 1 1
331	0 0 1 1 1 1 0 1 1 1 0 1 1 0 1 1 1 1 0 0 0 1 1
332	0 0 1 1 1 1 0 1 0 1 0 0 0 0 1 0 1 1 1 0 0 0 1
333	0 0 1 1 1 1 0 1 0 1 1 1 1 1 0 0 1 1 0 1 0 1
334	0 0 1 1 1 1 0 1 0 0 0 1 0 1 0 0 1 0 1 1 1 1 0
335	0 0 1 1 1 1 1 0 0 0 1 0 0 1 0 1 1 1 1 0 0 0
336	0 0 1 1 1 1 1 1 0 0 0 0 1 1 0 0 0 1 1 0 0 1 1
337	0 0 1 1 1 1 1 1 0 0 1 1 0 0 0 1 1 1 0 1 1 1
338	0 0 1 1 1 1 1 1 0 1 1 0 0 1 1 0 1 1 1 1 1 1 0
339	0 0 1 1 1 1 1 1 0 1 0 1 1 1 0 1 0 1 1 1 0 1 0
340	0 0 1 1 1 1 1 1 1 0 0 0 0 1 1 0 1 0 1 0 0 0
341	0 0 1 1 1 1 1 1 1 1 1 1 0 0 0 1 1 0 1 1 0 0
342	0 0 1 1 1 1 1 1 1 0 1 0 1 1 1 1 1 1 0 0 1 0 1
343	0 0 1 1 1 1 1 1 1 0 0 1 0 1 0 0 0 1 0 0 0 0 1
344	0 0 1 1 1 1 1 0 1 0 0 0 1 0 0 0 0 0 0 0 1 0 0
345	0 0 1 1 1 1 1 0 1 0 1 1 0 0 1 1 1 0 0 0 0 0 0
346	0 0 1 1 1 1 1 0 1 1 1 0 0 1 0 0 1 0 0 1 0 0 1
347	0 0 1 1 1 1 1 0 1 1 0 1 1 1 1 1 0 0 0 1 1 0 1
348	0 0 1 1 1 1 1 0 0 1 0 0 0 0 0 1 0 0 1 1 1 1 1
349	0 0 1 1 1 1 1 0 0 1 1 1 1 0 1 0 1 0 1 1 0 1 1

FIG.17G

TID	CODEWORD (23,11)
350	0 0 1 1 1 1 1 0 0 0 1 0 1 1 0 1 1 0 1 0 0 1 0
351	0 0 1 1 1 1 1 0 0 0 0 1 0 1 1 0 0 0 1 0 1 1 0
352	0 0 1 1 1 0 1 0 0 0 0 0 0 1 1 1 0 0 0 0 0 0 1
353	0 0 1 1 1 0 1 0 0 0 1 1 1 1 0 0 1 0 0 0 1 0 1
354	0 0 1 1 1 0 1 0 0 1 1 0 1 0 1 1 1 0 0 1 1 0 0
355	0 0 1 1 1 0 1 0 0 1 0 1 0 0 0 0 0 0 0 1 0 0 0
356	0 0 1 1 1 0 1 0 1 1 0 0 1 1 1 0 0 0 1 1 0 1 0
357	0 0 1 1 1 0 1 0 1 1 1 0 1 0 1 1 0 1 1 1 1 1 0
358	0 0 1 1 1 0 1 0 1 0 1 0 0 0 1 0 1 0 1 0 1 1 1
359	0 0 1 1 1 0 1 0 1 0 0 1 1 0 0 1 0 0 1 0 0 1 1
360	0 0 1 1 1 0 1 1 1 0 0 0 0 1 0 1 0 1 1 0 1 1 0
361	0 0 1 1 1 0 1 1 1 0 1 1 1 1 1 0 1 1 1 0 0 1 0
362	0 0 1 1 1 0 1 1 1 1 1 0 1 0 0 1 1 1 1 1 0 1 1
363	0 0 1 1 1 0 1 1 1 1 0 1 0 0 1 0 0 1 1 1 1 1 1
364	0 0 1 1 1 0 1 1 0 1 0 0 1 1 0 0 0 1 0 1 1 0 1
365	0 0 1 1 1 0 1 1 0 1 1 1 0 1 1 1 1 1 0 1 0 0 1
366	0 0 1 1 1 0 1 1 0 0 1 0 0 0 0 0 1 1 0 0 0 0 0
367	0 0 1 1 1 0 0 1 1 0 0 0 1 1 0 1 1 0 1 0 0 1 0
368	0 0 1 1 1 0 0 1 0 0 0 0 1 1 1 1 0 1 1 1 1 1 1
369	0 0 1 1 1 0 0 1 0 0 1 1 1 0 0 0 0 1 0 1 0 1 1
370	0 0 1 1 1 0 0 1 0 1 1 0 1 1 1 1 0 1 0 0 0 1 0
371	0 0 1 1 1 0 0 1 0 1 0 1 0 1 0 0 1 1 0 0 1 1 0
372	0 0 1 1 1 0 0 1 1 1 0 0 1 0 1 0 1 1 1 0 1 0 0
373	0 0 1 1 1 0 0 1 1 1 1 1 0 0 0 1 0 1 1 0 0 0 0
374	0 0 1 1 1 0 0 1 1 0 1 0 0 1 1 0 0 1 1 1 0 0 1
375	0 0 1 1 1 0 0 1 1 0 0 1 1 1 0 1 1 1 1 1 1 0 1
376	0 0 1 1 1 0 0 0 1 0 0 0 0 0 0 1 1 0 1 1 0 0 0
377	0 0 1 1 1 0 0 0 1 0 1 1 0 1 0 0 0 0 1 1 1 0 0
378	0 0 1 1 1 0 0 0 1 1 1 0 1 1 0 1 0 0 1 0 1 0 1
379	0 0 1 1 1 0 0 0 1 1 0 1 0 1 1 0 1 0 1 0 0 0 1
380	0 0 1 1 1 0 0 0 0 1 0 0 1 0 0 0 1 0 0 0 0 1 1
381	0 0 1 1 1 0 0 0 0 1 1 1 0 0 1 1 0 0 0 0 1 1 1
382	0 0 1 1 1 0 0 0 0 0 1 0 0 1 0 0 0 0 0 1 1 1 0
383	0 0 1 1 1 0 0 0 0 0 0 1 1 1 1 1 1 0 0 1 0 1 0
384	0 0 1 0 1 0 0 0 0 0 0 0 1 0 1 1 0 0 1 0 1 1 0
385	0 0 1 0 1 0 0 0 0 0 1 1 0 0 0 0 1 0 1 0 0 1 0
386	0 0 1 0 1 0 0 0 0 1 1 0 0 1 1 1 1 0 1 1 0 1 1
387	0 0 1 0 1 0 0 0 0 1 1 1 0 0 0 0 1 1 1 1 1 1 1
388	0 0 1 0 1 0 0 0 1 1 0 0 0 0 1 0 0 0 0 1 1 0 1
389	0 0 1 0 1 0 0 0 1 1 1 1 0 0 1 1 0 0 1 0 0 1 1
390	0 0 1 0 1 0 0 0 1 0 1 0 1 1 1 0 1 0 0 0 0 0 0
391	0 0 1 0 1 0 0 0 1 0 0 1 0 1 0 1 0 0 0 0 1 0 0
392	0 0 1 0 1 0 0 1 1 0 0 0 1 0 0 1 0 1 0 0 0 0 1
393	0 0 1 0 1 0 0 1 1 0 1 1 0 0 1 0 1 1 0 0 1 0 1
394	0 0 1 0 1 0 0 1 1 1 1 0 0 1 0 1 1 1 0 1 1 0 0
395	0 0 1 0 1 0 0 1 1 1 0 1 1 1 1 0 0 1 0 1 0 0 0
396	0 0 1 0 1 0 0 1 0 1 0 0 0 0 0 0 0 1 1 1 0 1 0
397	0 0 1 0 1 0 0 1 0 0 0 1 1 1 1 0 1 1 1 1 1 1 0
398	0 0 1 0 1 0 0 1 0 0 0 1 0 1 1 0 0 1 1 1 0 1 1
399	0 0 1 0 1 0 0 1 0 0 0 0 1 0 1 1 1 0 1 1 0 0 1

FIG.17H

TITLE: TRACK IDENTIFICATION CODEWORDS HAVING MULTIPLE BIT ERROR
CORRECTION CAPABILITY AND GENERALIZED GRAY CODE PROPERTY
INVENTOR: JAI N. SUBRAHMANYAM
ATTY DOCKET NUMBER: K35A1290

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TID	CODEWORD (23,11)
400	0 0 1 0 1 0 1 1 0 0 0 0 1 1 1 1 1 1 1 1 0 0 0
401	0 0 1 0 1 0 1 1 0 0 1 1 0 1 0 0 0 1 1 1 1 0 0
402	0 0 1 0 1 0 1 1 0 1 1 0 0 0 1 1 0 1 1 0 1 0 1
403	0 0 1 0 1 0 1 1 0 1 0 1 1 0 0 0 1 1 1 0 0 0 1
404	0 0 1 0 1 0 1 1 1 0 0 0 1 1 0 1 1 1 0 0 0 1 1
405	0 0 1 0 1 0 1 1 1 1 1 1 1 1 0 1 0 1 0 0 1 1 1
406	0 0 1 0 1 0 1 1 1 0 0 1 0 0 1 0 0 1 0 1 1 1 0
407	0 0 1 0 1 0 1 1 1 0 0 1 0 0 0 1 1 1 0 1 0 1 0
408	0 0 1 0 1 0 1 0 1 0 0 0 1 1 0 1 1 0 0 1 1 1 1
409	0 0 1 0 1 0 1 0 1 0 1 1 0 1 1 0 0 0 0 1 0 1 1
410	0 0 1 0 1 0 1 0 1 1 1 0 0 0 0 1 0 0 0 0 0 1 0
411	0 0 1 0 1 0 1 0 1 1 0 1 1 0 1 0 1 0 0 0 1 1 0
412	0 0 1 0 1 0 1 0 0 1 0 0 0 1 0 0 1 0 1 0 1 0 0
413	0 0 1 0 1 0 1 0 0 1 1 1 1 1 1 0 0 1 0 0 0 0 0
414	0 0 1 0 1 0 1 0 0 0 1 0 1 0 0 0 0 0 1 1 0 0 1
415	0 0 1 0 1 0 1 0 0 0 0 1 0 0 1 1 1 0 1 1 1 0 1
416	0 0 1 0 1 1 1 0 0 0 0 0 0 0 1 0 1 0 0 1 0 1 0
417	0 0 1 0 1 1 1 0 0 0 1 1 1 0 0 1 0 0 0 1 1 1 0
418	0 0 1 0 1 1 1 0 0 1 1 0 1 1 1 0 0 0 0 0 1 1 1
419	0 0 1 0 1 1 1 0 0 1 0 1 0 1 0 1 1 0 0 0 0 1 1
420	0 0 1 0 1 1 1 0 1 1 0 0 1 0 1 1 1 0 1 0 0 0 1
421	0 0 1 0 1 1 1 0 1 1 1 1 0 0 0 0 0 0 1 0 1 0 1
422	0 0 1 0 1 1 1 0 1 0 1 0 0 1 1 1 0 0 1 1 1 0 0
423	0 0 1 0 1 1 1 0 1 0 0 1 1 1 0 0 1 0 1 1 0 0 0
424	0 0 1 0 1 1 1 1 1 0 0 0 0 0 0 0 1 1 1 1 1 0 1
425	0 0 1 0 1 1 1 1 1 0 1 1 1 0 1 0 1 1 1 1 0 0 1
426	0 0 1 0 1 1 1 1 1 1 1 0 1 1 0 0 0 1 1 0 0 0 0
427	0 0 1 0 1 1 1 1 1 1 0 1 0 1 1 1 1 1 1 0 1 0 0
428	0 0 1 0 1 1 1 1 0 1 0 0 1 0 0 1 1 1 0 0 1 1 0
429	0 0 1 0 1 1 1 1 0 1 1 1 0 0 1 0 0 1 0 0 0 1 0
430	0 0 1 0 1 1 1 1 0 0 1 0 0 1 0 1 0 1 0 1 0 1 1
431	0 0 1 0 1 1 1 1 0 0 0 1 1 1 1 0 1 1 0 1 1 1 1
432	0 0 1 0 1 1 0 1 0 0 0 0 0 1 1 0 0 1 0 0 1 0 0
433	0 0 1 0 1 1 0 1 0 0 1 1 1 1 0 1 1 1 0 0 0 0 0
434	0 0 1 0 1 1 0 1 0 1 1 0 1 0 1 0 1 1 0 1 0 0 1
435	0 0 1 0 1 1 0 1 0 1 0 1 1 0 1 0 0 1 1 0 1 0 1
436	0 0 1 0 1 1 0 1 1 1 0 0 1 1 1 0 1 1 1 1 1 1 1
437	0 0 1 0 1 1 0 1 1 1 1 1 0 1 0 0 1 1 1 1 0 1 1
438	0 0 1 0 1 1 0 1 1 0 1 0 0 0 1 1 1 1 1 0 0 1 0
439	0 0 1 0 1 1 0 1 1 0 0 1 1 0 0 0 0 1 1 0 1 1 0
440	0 0 1 0 1 1 0 0 1 0 0 0 0 1 0 0 0 0 1 0 0 1 1
441	0 0 1 0 1 1 0 0 1 0 1 1 1 1 1 1 0 1 0 1 1 1 1
442	0 0 1 0 1 1 0 0 1 1 1 0 1 0 0 0 1 0 1 1 1 1 0
443	0 0 1 0 1 1 0 0 1 1 0 1 0 0 1 1 0 0 1 1 0 1 0
444	0 0 1 0 1 1 0 0 0 1 0 0 1 1 0 1 0 0 0 1 0 0 0
445	0 0 1 0 1 1 0 0 0 1 1 1 1 0 1 1 0 1 0 0 1 0 0
446	0 0 1 0 1 1 0 0 0 0 1 0 0 0 0 1 1 0 0 0 1 0 1
447	0 0 1 0 1 1 0 0 0 0 0 1 1 0 1 0 0 0 0 0 0 0 1
448	0 0 1 0 0 1 0 0 0 0 0 0 1 0 0 0 0 1 0 1 1 1 1
449	0 0 1 0 0 1 0 0 0 0 1 1 0 0 1 1 1 1 0 1 0 1 1

FIG.17I

TID	CODEWORD (23,11)
450	0 0 1 0 0 1 0 0 0 1 1 0 0 1 0 0 1 1 0 0 0 1 0
451	0 0 1 0 0 1 0 0 0 1 0 1 1 1 1 1 0 1 0 0 1 1 0
452	0 0 1 0 0 1 0 0 1 1 0 0 0 0 0 1 0 1 1 0 1 0 0
453	0 0 1 0 0 1 0 0 1 1 1 1 1 0 1 0 1 1 1 0 0 0 0
454	0 0 1 0 0 1 0 0 1 0 1 0 1 1 0 1 1 1 1 1 0 0 1
455	0 0 1 0 0 1 0 0 1 0 0 1 0 1 1 0 0 1 1 1 1 0 1
456	0 0 1 0 0 1 0 1 1 0 0 0 1 0 1 0 0 0 1 1 0 0 0
457	0 0 1 0 0 1 0 1 1 0 0 1 0 0 0 1 1 0 1 1 1 0 0
458	0 0 1 0 0 1 0 1 1 1 1 0 0 1 1 0 1 0 1 0 1 0 1
459	0 0 1 0 0 1 0 1 1 1 0 1 1 1 0 1 0 0 1 0 0 0 1
460	0 0 1 0 0 1 0 1 0 1 0 0 0 0 1 1 0 0 0 0 0 1 1
461	0 0 1 0 0 1 0 1 0 1 1 1 1 0 0 0 1 0 0 0 1 1 1
462	0 0 1 0 0 1 0 1 0 0 1 0 1 1 1 1 0 0 1 1 1 0 0
463	0 0 1 0 0 1 0 1 0 0 0 1 0 1 0 0 0 0 0 1 0 1 0
464	0 0 1 0 0 1 1 1 0 0 0 0 1 1 0 0 1 0 0 0 0 0 1
465	0 0 1 0 0 1 1 1 0 0 1 1 0 1 1 1 0 0 0 0 1 0 1
466	0 0 1 0 0 1 1 1 0 1 1 0 0 0 0 0 0 0 0 1 1 0 0
467	0 0 1 0 0 1 1 1 1 0 1 0 1 1 0 1 1 1 0 0 1 0 0
468	0 0 1 0 0 1 1 1 1 1 0 0 0 1 0 1 1 0 1 1 0 1 0
469	0 0 1 0 0 1 1 1 1 1 1 1 1 1 1 0 0 0 1 1 1 1 0
470	0 0 1 0 0 1 1 1 1 0 1 0 1 0 0 1 0 0 1 0 1 1 1
471	0 0 1 0 0 1 1 1 1 0 0 1 0 0 1 0 1 0 1 0 0 1 1
472	0 0 1 0 0 1 1 0 1 0 0 0 1 1 1 0 1 1 1 0 1 1 0
473	0 0 1 0 0 1 1 0 1 0 1 1 0 1 0 1 0 1 1 0 0 1 0
474	0 0 1 0 0 1 1 0 1 1 1 0 0 0 1 0 0 1 1 1 0 1 1
475	0 0 1 0 0 1 1 0 1 1 0 1 1 0 0 1 1 1 1 1 1 1 1
476	0 0 1 0 0 1 1 0 0 1 0 0 0 1 1 1 1 1 0 1 1 0 1
477	0 0 1 0 0 1 1 0 0 1 1 1 1 0 0 0 1 0 1 0 0 0 1
478	0 0 1 0 0 1 1 0 0 0 1 0 1 0 1 1 0 1 0 0 0 0 0
479	0 0 1 0 0 1 1 0 0 0 0 1 0 0 0 0 1 1 0 0 1 0 0
480	0 0 1 0 0 0 1 0 0 0 0 0 0 0 0 1 1 1 1 0 0 1 1
481	0 0 1 0 0 0 1 0 0 0 1 1 1 0 1 0 0 1 1 0 1 1 1
482	0 0 1 0 0 0 1 0 0 1 1 0 1 1 0 1 0 1 1 1 1 1 0
483	0 0 1 0 0 0 1 0 0 1 0 1 0 1 1 0 1 1 1 1 0 1 0
484	0 0 1 0 0 0 1 0 1 1 0 0 1 0 0 0 1 1 0 1 0 0 0
485	0 0 1 0 0 0 1 0 1 1 1 1 0 0 1 1 0 1 0 1 1 0 0
486	0 0 1 0 0 0 1 0 1 0 1 0 0 1 0 0 0 1 0 0 1 0 1
487	0 0 1 0 0 0 1 0 1 0 0 1 1 1 1 1 1 1 0 0 0 0 1
488	0 0 1 0 0 0 1 1 1 0 0 0 0 0 1 1 1 0 0 0 1 0 0
489	0 0 1 0 0 0 1 1 1 0 1 1 1 0 0 0 0 0 0 0 0 0 0
490	0 0 1 0 0 0 1 1 1 1 1 0 1 1 1 1 0 0 0 1 0 0 1
491	0 0 1 0 0 0 1 1 1 1 0 1 0 1 0 0 1 0 0 1 1 0 1
492	0 0 1 0 0 0 1 1 0 1 0 0 1 0 1 0 1 0 1 1 1 1 1
493	0 0 1 0 0 0 1 1 0 1 1 1 0 0 0 1 0 0 1 1 0 1 1
494	0 0 1 0 0 0 1 1 0 0 1 0 0 1 1 0 0 0 1 0 0 1 0
495	0 0 1 0 0 0 1 1 0 0 0 1 1 1 0 1 1 0 1 0 1 1 0
496	0 0 1 0 0 0 0 1 0 0 1 0 0 1 0 0 1 0 0 1 1 0 1
497	0 0 1 0 0 0 0 1 0 0 1 1 1 1 1 0 1 1 1 0 0 1 0
498	0 0 1 0 0 0 0 1 0 1 1 0 1 0 0 1 1 0 1 0 0 0 0
499	0 0 1 0 0 0 0 1 0 1 0 1 0 0 1 0 0 0 1 0 1 0 0

FIG.17J

TITLE: TRACK IDENTIFICATION CODEWORDS HAVING MULTIPLE BIT ERROR
CORRECTION CAPABILITY AND GENERALIZED GRAY CODE PROPERTY
INVENTOR: JAI N. SUBRAHMANYAM
ATTY DOCKET NUMBER: K35A1290

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TID	CODEWORD (23,11)
500	0 0 1 0 0 0 0 1 1 1 0 0 1 1 0 0 0 0 0 0 1 1 0
501	0 0 1 0 0 0 0 1 1 1 1 0 1 1 1 1 0 0 0 0 1 0
502	0 0 1 0 0 0 0 1 1 0 1 0 0 0 0 1 0 0 1 0 1 1
503	0 0 1 0 0 0 0 1 1 0 0 1 1 0 1 1 0 0 0 1 1 1
504	0 0 1 0 0 0 0 0 1 0 0 0 0 1 1 1 0 1 0 1 0 1 0
505	0 0 1 0 0 0 0 0 1 0 1 1 1 1 0 0 1 1 0 1 1 1 0
506	0 0 1 0 0 0 0 0 1 1 1 0 1 0 1 1 1 1 0 0 1 1 1
507	0 0 1 0 0 0 0 0 1 1 0 1 0 0 0 0 0 1 0 0 0 1 1
508	0 0 1 0 0 0 0 0 0 1 0 0 1 1 1 0 0 1 1 0 0 0 1
509	0 0 1 0 0 0 0 0 0 1 1 1 0 1 0 1 1 1 1 0 1 0 1
510	0 0 1 0 0 0 0 0 0 1 0 0 0 1 0 1 1 1 1 1 0 0
511	0 0 1 0 0 0 0 0 0 0 1 1 0 0 1 0 1 1 1 0 0 0
512	0 1 1 0 0 0 0 0 0 0 0 1 0 1 1 1 0 0 1 0 0 1
513	0 1 1 0 0 0 0 0 0 1 1 0 0 0 0 0 0 1 1 0 1
514	0 1 1 0 0 0 0 0 1 1 0 0 1 1 1 0 0 0 0 1 0 0
515	0 1 1 0 0 0 0 0 1 0 1 1 1 0 0 1 0 0 0 0 0 0
516	0 1 1 0 0 0 0 1 1 0 0 0 0 1 0 1 0 1 0 0 1 0
517	0 1 1 0 0 0 0 1 1 1 1 1 0 0 1 0 0 0 1 0 1 1 0
518	0 1 1 0 0 0 0 1 0 1 0 1 1 1 0 0 0 1 1 1 1
519	0 1 1 0 0 0 0 1 0 0 1 0 1 0 1 1 0 1 1 0 1 1
520	0 1 1 0 0 0 0 1 1 0 0 0 1 0 0 1 1 1 1 1 1 0
521	0 1 1 0 0 0 0 1 1 0 1 1 0 0 1 0 0 1 1 1 0 1 0
522	0 1 1 0 0 0 0 1 1 1 1 0 0 1 0 1 0 1 1 0 0 1 1
523	0 1 1 0 0 0 0 1 1 1 0 1 1 1 1 0 1 1 1 0 1 1 1
524	0 1 1 0 0 0 0 1 0 1 0 0 0 0 0 0 1 1 0 0 1 0 1
525	0 1 1 0 0 0 0 1 0 1 1 1 1 0 1 1 0 1 0 0 0 0 1
526	0 1 1 0 0 0 0 1 0 0 1 0 1 0 0 0 1 0 0 1 0 0 0
527	0 1 1 0 0 0 0 1 0 0 0 1 0 1 1 1 1 1 0 1 1 0 0
528	0 1 1 0 0 0 1 1 0 0 0 0 1 1 1 1 0 1 0 0 1 1 1
529	0 1 1 0 0 0 1 1 0 0 1 1 0 1 0 0 1 1 0 0 0 1 1
530	0 1 1 0 0 0 1 1 0 1 1 0 0 0 1 1 1 1 0 1 0 1 0
531	0 1 1 0 0 0 1 1 0 1 0 1 1 0 0 0 0 1 0 1 1 1 0
532	0 1 1 0 0 0 1 1 1 1 0 0 0 1 1 0 0 1 1 1 1 0 0
533	0 1 1 0 0 0 1 1 1 1 1 1 1 0 1 1 1 1 1 0 0 0
534	0 1 1 0 0 0 1 1 1 0 1 0 1 0 1 0 1 1 1 0 0 0 1
535	0 1 1 0 0 0 1 1 1 0 0 1 0 0 0 1 0 1 1 0 1 0 1
536	0 1 1 0 0 0 1 0 1 0 0 0 1 1 0 1 0 0 1 0 0 0 0
537	0 1 1 0 0 0 1 0 1 0 1 1 0 1 1 0 1 0 1 0 1 0 0
538	0 1 1 0 0 0 1 0 1 1 1 0 0 0 0 1 1 0 1 1 1 0 1
539	0 1 1 0 0 0 1 0 1 1 0 1 1 0 1 0 0 0 1 1 0 0 1
540	0 1 1 0 0 0 1 0 0 1 0 0 0 1 0 0 0 0 1 0 1 1
541	0 1 1 0 0 0 1 0 0 1 1 1 1 1 1 1 0 0 1 1 1 1
542	0 1 1 0 0 0 1 0 0 0 1 0 1 0 0 0 1 0 0 0 1 1 0
543	0 1 1 0 0 0 1 0 0 0 0 1 0 0 1 1 0 0 0 0 0 1 0
544	0 1 1 0 0 1 1 0 0 0 0 0 0 1 0 0 0 1 0 1 0 1
545	0 1 1 0 0 1 1 0 0 0 1 1 1 0 1 0 1 0 0 0 1
546	0 1 1 0 0 1 1 0 0 1 1 0 1 1 1 0 1 0 1 1 0 0 0
547	0 1 1 0 0 1 1 0 0 1 0 1 0 1 0 1 0 0 1 1 1 0 0
548	0 1 1 0 0 1 1 0 1 1 0 0 1 0 1 1 0 0 0 1 1 1 0
549	0 1 1 0 0 1 1 0 1 1 1 1 0 0 0 0 1 0 0 1 0 1 0

FIG.17K

TID	CODEWORD (23,11)
550	0 1 1 0 0 1 1 0 1 0 1 0 0 1 1 1 1 0 0 0 0 1 1
551	0 1 1 0 0 1 1 0 1 0 0 1 1 1 0 0 0 0 0 0 1 1 1
552	0 1 1 0 0 1 1 1 1 0 0 0 0 0 0 0 1 0 0 0 1 0
553	0 1 1 0 0 1 1 1 1 0 1 1 1 0 1 1 1 1 0 0 1 1 0
554	0 1 1 0 0 1 1 1 1 1 1 0 1 1 0 0 1 1 0 1 1 1 1
555	0 1 1 0 0 1 1 1 1 1 0 1 0 1 1 1 0 1 0 1 0 1 1
556	0 1 1 0 0 1 1 1 0 1 0 0 1 0 0 1 0 1 1 1 0 0 1
557	0 1 1 0 0 1 1 1 0 1 1 1 0 0 1 0 1 1 1 1 1 0 1
558	0 1 1 0 0 1 1 1 0 0 1 0 0 0 1 0 1 1 1 1 0 1 0 0
559	0 1 1 0 0 1 1 1 0 0 0 1 1 1 0 0 1 1 0 0 0 0 0
560	0 1 1 0 0 1 0 1 0 0 0 0 0 1 1 0 1 1 1 1 0 1 1
561	0 1 1 0 0 1 0 1 0 0 1 1 1 1 0 1 0 1 1 1 1 1 1
562	0 1 1 0 0 1 0 1 0 1 1 0 1 0 1 0 0 1 1 0 1 1 0
563	0 1 1 0 0 1 0 1 0 1 0 1 0 0 0 1 1 1 1 0 0 1 0
564	0 1 1 0 0 1 0 1 1 1 0 0 1 1 1 1 1 1 0 0 0 0 0
565	0 1 1 0 0 1 0 1 1 1 1 0 1 0 0 0 1 0 0 1 0 0
566	0 1 1 0 0 1 0 1 1 0 1 0 0 0 1 1 0 1 0 1 1 0 1
567	0 1 1 0 0 1 0 1 1 0 0 1 1 0 0 0 1 1 0 1 0 0 1
568	0 1 1 0 0 1 0 0 1 0 0 0 1 0 0 1 0 0 1 1 0 0
569	0 1 1 0 0 1 0 0 1 0 1 1 1 1 1 1 0 0 1 0 0 0 0
570	0 1 1 0 0 1 0 0 1 1 1 0 1 0 0 0 0 0 0 0 0 1
571	0 1 1 0 0 1 0 0 1 1 0 1 0 0 1 1 1 0 0 0 1 0 1
572	0 1 1 0 0 1 0 0 0 1 0 0 1 1 0 1 1 0 1 0 1 1 1
573	0 1 1 0 0 1 0 0 0 1 1 1 0 1 1 0 0 0 1 0 0 1 1
574	0 1 1 0 0 1 0 0 0 0 1 0 0 0 0 1 0 0 1 1 0 1 0
575	0 1 1 0 0 1 0 0 0 0 0 1 1 0 1 0 1 0 1 1 1 1 0
576	0 1 1 0 1 1 0 0 0 0 0 0 1 0 0 0 1 1 1 0 0 0 0
577	0 1 1 0 1 1 0 0 0 0 1 1 0 0 1 1 0 1 1 0 1 0 0
578	0 1 1 0 1 1 0 0 0 1 1 0 0 1 0 0 0 1 1 1 1 0 1
579	0 1 1 0 1 1 0 0 0 1 0 1 1 1 1 1 1 1 1 0 0 1
580	0 1 1 0 1 1 0 0 1 1 0 0 0 0 0 1 1 1 0 1 0 1 1
581	0 1 1 0 1 1 0 0 1 1 1 1 1 0 1 0 0 1 0 1 1 1 1
582	0 1 1 0 1 1 0 0 1 0 1 0 1 1 0 1 0 1 0 0 1 1 0
583	0 1 1 0 1 1 0 0 1 0 0 1 0 1 1 0 1 1 0 0 0 1 0
584	0 1 1 0 1 1 0 1 1 0 0 0 1 0 1 0 1 0 0 0 1 1 1
585	0 1 1 0 1 1 0 1 1 0 1 1 0 0 0 1 0 0 0 0 0 1 1
586	0 1 1 0 1 1 0 1 1 1 1 0 0 1 1 0 0 0 0 1 0 1 0
587	0 1 1 0 1 1 0 1 1 1 0 1 1 0 1 1 1 0 0 1 1 1 0
588	0 1 1 0 1 1 0 1 0 1 0 0 0 0 1 1 1 0 1 1 1 0 0
589	0 1 1 0 1 1 0 1 0 1 1 1 1 0 0 0 0 0 1 1 0 0 0
590	0 1 1 0 1 1 0 1 0 0 1 0 1 1 1 1 0 0 1 0 0 0 1
591	0 1 1 0 1 1 0 1 0 0 0 1 0 1 0 0 1 0 1 0 1 0 1
592	0 1 1 0 1 1 1 1 0 0 0 0 1 1 0 0 0 0 1 1 1 1 0
593	0 1 1 0 1 1 1 1 0 0 1 1 0 1 1 1 1 0 1 1 0 1 0
594	0 1 1 0 1 1 1 1 0 1 1 0 0 0 0 1 0 1 0 0 1 1
595	0 1 1 0 1 1 1 1 0 1 0 1 1 0 1 1 0 0 1 0 1 1 1
596	0 1 1 0 1 1 1 1 1 1 0 0 0 1 0 1 0 0 0 0 1 0 1
597	0 1 1 0 1 1 1 1 1 1 1 1 1 1 1 1 1 0 1 0 0 0 0 1
598	0 1 1 0 1 1 1 1 1 0 1 0 1 0 0 1 1 0 0 1 0 0 0
599	0 1 1 0 1 1 1 1 1 0 0 1 0 0 1 0 0 0 0 1 1 0 0

FIG.17L

TITLE: TRACK IDENTIFICATION CODEWORDS HAVING MULTIPLE BIT ERROR
CORRECTION CAPABILITY AND GENERALIZED GRAY CODE PROPERTY
INVENTOR: JAI N. SUBRAHMANYAM
ATTY DOCKET NUMBER: K35A1290

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TID	CODEWORD (23,11)
600	0 1 1 0 1 1 1 0 1 0 0 0 1 1 1 0 0 1 0 1 0 0 1
601	0 1 1 0 1 1 1 0 1 0 1 1 0 1 0 1 1 1 0 1 1 0 1
602	0 1 1 0 1 1 1 0 1 1 1 0 0 0 1 0 1 1 0 0 1 0 0
603	0 1 1 0 1 1 1 0 1 1 0 1 1 0 0 1 0 1 0 0 0 0 0
604	0 1 1 0 1 1 1 0 0 1 0 0 0 1 1 1 0 1 1 0 0 1 0
605	0 1 1 0 1 1 1 0 0 1 1 1 1 1 0 0 1 1 1 0 1 1 0
606	0 1 1 0 1 1 1 0 0 0 1 0 1 0 1 1 1 1 1 1 1 1 1
607	0 1 1 0 1 1 1 0 0 0 0 1 0 0 0 0 1 1 1 0 1 1
608	0 1 1 0 1 0 1 0 0 0 0 0 0 0 0 1 0 1 0 1 1 0 0
609	0 1 1 0 1 0 1 0 0 0 1 1 1 0 1 0 1 1 0 1 0 0 0
610	0 1 1 0 1 0 1 0 0 1 1 0 1 1 0 1 1 1 0 0 0 0 1
611	0 1 1 0 1 0 1 0 0 1 0 1 0 1 1 0 0 1 0 0 1 0 1
612	0 1 1 0 1 0 1 0 1 1 0 0 1 0 0 0 0 1 1 0 1 1 1
613	0 1 1 0 1 0 1 0 1 1 1 0 0 1 1 1 1 1 0 0 1 1
614	0 1 1 0 1 0 1 0 1 0 1 0 0 1 0 0 1 1 1 1 0 1 0
615	0 1 1 0 1 0 1 0 1 0 0 1 1 1 1 0 1 1 1 1 1 0
616	0 1 1 0 1 0 1 1 1 0 0 0 0 0 1 1 0 0 1 1 0 1 1
617	0 1 1 0 1 0 1 1 1 0 1 1 1 0 0 0 1 0 1 1 1 1
618	0 1 1 0 1 0 1 1 1 1 0 1 0 1 1 1 1 1 0 1 0 1 1 0
619	0 1 1 0 1 0 1 1 1 0 1 0 1 0 0 0 0 1 0 0 1 0
620	0 1 1 0 1 0 1 1 0 1 0 0 1 0 1 0 0 0 0 0 0 0 0
621	0 1 1 0 1 0 1 1 0 1 1 1 0 0 0 1 1 0 0 0 1 0 0
622	0 1 1 0 1 0 1 1 0 0 1 0 0 1 1 0 1 0 0 1 1 0 1
623	0 1 1 0 1 0 1 1 0 0 0 1 1 1 0 1 0 0 0 1 0 0 1
624	0 1 1 0 1 0 0 1 0 0 0 0 0 1 0 1 1 0 0 0 0 1 0
625	0 1 1 0 1 0 0 1 0 0 1 1 1 1 1 0 0 0 0 0 1 1 0
626	0 1 1 0 1 0 0 1 0 1 1 0 1 0 0 1 0 0 0 1 1 1 1
627	0 1 1 0 1 0 0 1 0 1 0 1 0 0 1 0 1 0 0 1 0 1 1
628	0 1 1 0 1 0 0 1 1 1 0 0 1 1 0 1 0 1 0 1 1 0 0 1
629	0 1 1 0 1 0 0 1 1 1 1 0 1 1 1 0 0 1 1 1 0 1
630	0 1 1 0 1 0 0 1 1 0 1 0 0 0 0 0 0 1 0 1 0 0
631	0 1 1 0 1 0 0 1 1 0 0 1 1 0 1 1 1 0 1 0 0 0 0
632	0 1 1 0 1 0 0 0 1 0 0 0 0 1 1 1 1 1 0 1 0 1
633	0 1 1 0 1 0 0 0 1 0 1 1 1 1 0 0 0 1 1 0 0 0 1
634	0 1 1 0 1 0 0 0 1 1 1 0 1 0 1 1 0 1 1 1 0 0 0
635	0 1 1 0 1 0 0 0 1 1 0 1 0 0 0 0 1 1 1 1 1 0 0
636	0 1 1 0 1 0 0 0 0 1 0 0 1 1 1 0 1 1 0 1 1 1 0
637	0 1 1 0 1 0 0 0 0 1 1 1 0 1 0 1 0 1 0 1 0 1 0
638	0 1 1 0 1 0 0 0 0 0 1 1 0 0 1 1 1 0 0 1 0 0 1 1
639	0 1 1 0 1 0 0 0 0 0 0 1 1 0 0 1 1 1 0 0 1 1 1
640	0 1 1 1 0 0 0 0 0 0 0 1 1 0 1 0 1 1 1 0 1 1
641	0 1 1 1 0 0 0 0 0 1 1 0 1 1 0 1 1 1 1 1 1 1
642	0 1 1 1 0 0 0 0 1 1 0 0 0 0 1 1 1 1 0 1 1 0
643	0 1 1 1 0 0 0 0 1 0 1 1 0 1 0 0 1 1 0 0 1 0
644	0 1 1 1 0 0 0 1 1 0 0 0 1 0 0 0 1 0 0 0 0 0
645	0 1 1 1 0 0 0 1 1 1 1 1 1 1 1 1 1 0 0 1 0 0
646	0 1 1 1 0 0 0 1 0 1 0 1 0 0 0 1 1 0 1 1 0 1
647	0 1 1 1 0 0 0 1 0 0 1 0 0 1 0 1 1 0 1 0 0 1
648	0 1 1 1 0 0 1 1 0 0 0 1 1 1 0 0 0 1 1 0 0
649	0 1 1 1 0 0 1 1 0 1 1 0 1 0 0 1 0 0 1 0 0 0

TID	CODEWORD (23,11)
650	0 1 1 1 1 0 0 1 1 1 1 0 0 0 1 1 1 0 0 0 0 0 1
651	0 1 1 1 1 0 0 1 1 1 0 1 1 0 0 0 0 0 0 0 1 0 1
652	0 1 1 1 1 0 0 1 0 1 0 0 0 1 1 0 0 0 1 0 1 1 1
653	0 1 1 1 1 0 0 1 0 1 1 1 1 0 1 1 0 1 0 0 1 1
654	0 1 1 1 1 0 0 1 0 0 1 0 1 0 1 0 1 0 1 1 0 1 0
655	0 1 1 1 1 0 0 1 0 0 0 1 0 0 0 1 0 0 1 1 1 1 0
656	0 1 1 1 1 0 1 1 0 0 0 0 1 0 0 1 1 0 1 0 1 0 1
657	0 1 1 1 1 0 1 1 0 0 1 1 0 0 1 0 0 0 1 0 0 0 1
658	0 1 1 1 1 0 1 1 0 1 1 0 0 1 0 1 0 0 1 1 0 0 0
659	0 1 1 1 1 0 1 1 0 1 0 1 1 1 0 1 0 1 1 1 0 0
660	0 1 1 1 1 0 1 1 1 1 0 0 0 0 0 1 0 0 1 1 1 0
661	0 1 1 1 1 0 1 1 1 1 1 1 1 0 1 1 0 0 0 1 0 1 0
662	0 1 1 1 1 0 1 1 1 0 1 0 1 1 0 0 0 0 0 0 0 1 1
663	0 1 1 1 1 0 1 1 1 0 0 1 0 1 1 1 1 0 0 0 1 1 1
664	0 1 1 1 1 0 1 0 1 0 0 0 1 0 1 1 1 1 0 0 0 1 0
665	0 1 1 1 1 0 1 0 1 0 1 1 0 0 0 0 0 1 0 0 1 1 0
666	0 1 1 1 1 0 1 0 1 1 1 0 0 1 1 1 0 1 0 1 1 1 1
667	0 1 1 1 1 0 1 0 1 1 0 1 1 1 0 0 1 1 0 1 0 1 1
668	0 1 1 1 1 0 1 0 0 1 0 0 0 0 0 1 0 1 1 1 0 0 1
669	0 1 1 1 1 0 1 0 0 1 1 1 1 1 0 0 1 0 1 1 1 0 0
670	0 1 1 1 1 0 1 0 0 0 1 0 1 1 1 0 0 1 1 0 1 0 0
671	0 1 1 1 1 0 1 0 0 0 0 1 0 1 0 1 1 1 1 0 0 0 0
672	0 1 1 1 1 1 0 0 0 0 0 0 1 0 0 1 1 0 0 1 1 1
673	0 1 1 1 1 1 0 0 0 1 1 1 1 1 1 0 1 0 0 0 1 1
674	0 1 1 1 1 1 0 0 1 1 0 1 0 0 0 0 1 0 1 0 1 0
675	0 1 1 1 1 1 0 0 1 0 1 0 0 1 1 1 1 0 1 1 1 0
676	0 1 1 1 1 1 0 1 1 0 0 1 1 0 1 1 1 1 1 1 0 0
677	0 1 1 1 1 1 0 1 1 0 1 1 1 1 0 1 1 0 0 1 1 0 0 0
678	0 1 1 1 1 1 0 1 0 1 0 1 0 0 0 0 1 0 1 1 0 0 0 1
679	0 1 1 1 1 1 0 1 0 1 1 0 1 1 0 1 1 1 0 1 0 1
680	0 1 1 1 1 1 1 0 0 0 0 1 1 0 1 0 1 0 0 0 0 0
681	0 1 1 1 1 1 1 0 0 1 0 1 1 1 0 1 0 0 1 0 1 0 0
682	0 1 1 1 1 1 1 1 1 1 0 1 0 1 0 0 0 1 1 1 0 1
683	0 1 1 1 1 1 1 1 1 0 1 0 0 0 1 1 0 1 1 0 0 1
684	0 1 1 1 1 1 1 0 1 0 0 1 1 1 1 0 0 1 0 1 1
685	0 1 1 1 1 1 1 0 1 1 1 0 1 0 0 0 0 0 1 1 1 1
686	0 1 1 1 1 1 1 1 0 0 1 0 0 0 1 1 0 0 0 0 1 1 0
687	0 1 1 1 1 1 1 1 0 0 0 1 1 0 0 0 1 0 0 0 0 1 0
688	0 1 1 1 1 1 0 1 0 0 0 0 0 0 0 0 0 0 1 0 0 1
689	0 1 1 1 1 1 0 1 0 0 1 1 1 0 1 1 1 0 0 1 1 0 1
690	0 1 1 1 1 0 1 0 1 1 0 1 1 0 0 1 0 0 0 1 0 0
691	0 1 1 1 1 0 1 0 1 0 1 0 1 1 1 0 0 0 0 0 0 0
692	0 1 1 1 1 0 1 1 1 0 0 1 0 0 1 0 0 1 0 0 1 0
693	0 1 1 1 1 0 1 1 1 1 1 0 0 1 0 1 0 1 0 1 1 0
694	0 1 1 1 1 0 1 1 0 1 0 0 1 0 1 1 0 1 1 1 1 1
695	0 1 1 1 1 0 1 1 0 0 1 1 1 1 0 0 0 1 1 0 1 1
696	0 1 1 1 1 0 0 1 0 0 0 0 0 1 0 0 1 1 1 1 1 0
697	0 1 1 1 1 0 0 1 0 1 1 1 0 0 1 1 1 1 1 0 1 0
698	0 1 1 1 1 0 0 1 1 1 0 1 1 1 0 1 1 1 0 0 1 1
699	0 1 1 1 1 0 0 1 1 0 1 0 1 0 1 0 1 1 0 1 1 1

FIG.17M   FIG.17N

TITLE: TRACK IDENTIFICATION CODEWORDS HAVING MULTIPLE BIT ERROR
CORRECTION CAPABILITY AND GENERALIZED GRAY CODE PROPERTY
INVENTOR: JAI N. SUBRAHMANYAM
ATTY DOCKET NUMBER: K35A1290

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TID	CODEWORD (23,11)
700	0 1 1 1 1 1 0 0 0 1 0 0 1 0 1 1 0 1 0 0 1 0 1
701	0 1 1 1 1 1 0 0 0 1 1 1 0 0 0 0 1 1 0 0 0 0 1
702	0 1 1 1 1 1 0 0 0 0 1 0 0 1 1 1 1 1 0 1 0 0 0
703	0 1 1 1 1 1 0 0 0 0 0 1 1 1 0 0 0 1 0 1 1 0 0
704	0 1 1 1 0 1 0 0 0 0 0 0 1 1 1 0 0 0 0 0 0 1 0
705	0 1 1 1 0 1 0 0 0 0 1 1 0 1 0 1 1 0 0 0 1 1 0
706	0 1 1 1 0 1 0 0 0 1 1 0 0 0 1 0 1 0 0 1 1 1 1
707	0 1 1 1 0 1 0 0 0 1 0 1 1 0 0 1 0 0 0 1 0 1 1
708	0 1 1 1 0 1 0 0 1 1 0 0 0 1 1 1 0 0 1 1 0 0 1
709	0 1 1 1 0 1 0 0 1 1 1 1 1 1 0 0 1 0 1 1 1 0 1
710	0 1 1 1 0 1 0 0 1 0 1 0 1 0 1 1 1 0 1 0 1 0 0
711	0 1 1 1 0 1 0 0 1 0 0 1 0 0 0 0 0 1 0 0 0 0 0
712	0 1 1 1 0 1 0 1 1 0 0 0 1 1 0 0 0 1 1 0 1 0 1
713	0 1 1 1 0 1 0 1 1 0 1 1 0 1 1 1 1 1 0 0 0 1
714	0 1 1 1 0 1 0 1 1 1 0 0 0 0 1 1 1 1 0 0 0
715	0 1 1 1 0 1 0 1 1 1 0 1 1 0 1 1 0 1 1 1 1 0 0
716	0 1 1 1 0 1 0 1 0 1 0 0 0 1 0 1 0 1 0 1 1 1 0
717	0 1 1 1 0 1 0 1 0 1 1 1 1 1 1 0 1 1 0 1 0 1 0
718	0 1 1 1 0 1 0 1 0 0 1 0 1 0 0 1 1 1 0 0 0 1 1
719	0 1 1 1 0 1 0 1 0 0 0 1 0 0 0 1 0 0 1 0 0 1 1
720	0 1 1 1 0 1 1 1 0 0 0 0 1 0 1 0 1 1 0 1 1 0 0
721	0 1 1 1 0 1 1 1 0 0 1 1 0 0 0 1 0 1 0 1 0 0 0
722	0 1 1 1 0 1 1 1 0 1 1 0 0 1 1 0 0 1 0 0 0 0 1
723	0 1 1 1 0 1 1 1 0 1 0 1 1 1 0 1 1 1 0 0 1 0 1
724	0 1 1 1 0 1 1 1 1 1 0 0 0 0 1 1 1 1 1 0 1 1 1
725	0 1 1 1 0 1 1 1 1 1 1 1 0 0 0 0 1 1 0 0 1 1
726	0 1 1 1 0 1 1 1 1 0 1 0 1 1 1 1 0 1 1 1 0 1 0
727	0 1 1 1 0 1 1 1 1 0 0 1 0 1 0 0 1 1 1 1 1 1 0
728	0 1 1 1 0 1 1 0 1 0 0 0 1 0 0 0 1 0 1 1 0 1 1
729	0 1 1 1 0 1 1 0 1 0 1 1 0 0 1 1 0 0 1 1 1 1 1
730	0 1 1 1 0 1 1 0 1 1 1 0 0 1 0 0 0 0 1 0 1 1 0
731	0 1 1 1 0 1 1 0 1 1 0 1 1 1 1 1 1 0 1 0 0 1 0
732	0 1 1 1 0 1 1 0 0 1 0 0 0 0 0 1 1 0 0 0 0 0 0
733	0 1 1 1 0 1 1 0 0 1 1 1 1 0 1 0 0 0 0 0 1 0 0
734	0 1 1 1 0 1 1 0 0 0 1 0 1 1 0 1 0 0 0 1 1 0 1
735	0 1 1 1 0 1 1 0 0 0 0 1 0 1 1 0 1 0 0 1 0 0 1
736	0 1 1 1 0 0 1 0 0 0 0 0 0 1 1 1 1 0 1 1 1 1 0
737	0 1 1 1 0 0 1 0 0 0 1 1 1 1 0 0 0 0 1 1 0 1 0
738	0 1 1 1 0 0 1 0 0 1 0 1 0 1 1 0 0 1 0 0 1 1
739	0 1 1 1 0 0 1 0 0 1 0 1 1 0 0 1 1 1 0 1 0 1 1
740	0 1 1 1 0 0 1 0 1 1 0 0 1 1 1 0 1 0 0 0 1 0 1
741	0 1 1 1 0 0 1 0 1 1 1 0 1 0 1 0 0 0 0 0 0 1
742	0 1 1 1 0 0 1 0 1 0 1 0 0 0 1 0 0 0 0 1 0 0 0
743	0 1 1 1 0 0 1 0 1 0 0 1 1 0 0 1 1 0 0 1 1 0 0
744	0 1 1 1 0 0 1 1 1 0 0 0 0 1 0 1 1 1 0 1 0 0 1
745	0 1 1 1 0 0 1 1 1 0 1 1 1 1 1 0 0 1 0 1 1 0 1
746	0 1 1 1 0 0 1 1 1 1 0 1 0 0 0 1 0 1 0 0 1 0 0
747	0 1 1 1 0 0 1 1 1 1 0 1 0 0 1 0 1 1 0 0 0 0 0
748	0 1 1 1 0 0 1 1 0 1 0 0 1 1 0 0 1 1 1 0 0 1 0
749	0 1 1 1 0 0 1 1 0 1 1 1 0 1 1 1 0 1 1 0 1 1 0

FIG.17O

TID	CODEWORD (23,11)
750	0 1 1 1 0 0 1 1 0 0 1 0 0 0 0 0 0 1 1 1 1 1 1
751	0 1 1 1 0 0 1 1 0 0 0 1 1 0 1 1 1 1 1 1 0 1 1
752	0 1 1 1 0 0 0 1 0 0 0 0 0 0 1 1 0 1 1 0 0 0 0
753	0 1 1 1 0 0 0 1 0 0 1 1 1 0 0 0 1 1 1 0 1 0 0
754	0 1 1 1 0 0 0 1 0 1 1 0 1 1 1 1 1 1 1 1 1 0 1
755	0 1 1 1 0 0 0 1 0 1 0 1 0 1 0 0 0 1 1 1 0 0 1
756	0 1 1 1 0 0 0 1 1 1 0 0 1 0 1 0 0 1 0 1 0 1 1
757	0 1 1 1 0 0 0 1 1 1 1 1 0 0 0 1 1 1 0 1 1 1 1
758	0 1 1 1 0 0 0 1 1 0 1 0 0 1 1 0 1 1 0 0 1 1 0
759	0 1 1 1 0 0 0 1 1 0 0 1 1 1 0 1 0 1 0 0 0 1 0
760	0 1 1 1 0 0 0 0 1 0 0 0 0 0 1 0 0 0 0 0 1 1 1
761	0 1 1 1 0 0 0 0 1 0 1 1 1 0 1 0 1 0 0 0 0 1 1
762	0 1 1 1 0 0 0 0 1 1 1 0 1 1 0 1 1 0 0 1 0 1 0
763	0 1 1 1 0 0 0 0 1 1 0 1 0 1 1 0 0 0 0 1 1 1 0
764	0 1 1 1 0 0 0 0 0 1 0 0 1 0 0 0 0 0 1 1 1 0 0
765	0 1 1 1 0 0 0 0 0 1 1 1 0 0 1 1 1 0 1 1 0 0 0
766	0 1 1 1 0 0 0 0 0 0 1 0 0 1 0 0 1 0 1 0 0 0 1
767	0 1 1 1 0 0 0 0 0 0 1 1 1 1 1 0 0 1 0 1 0 1
768	0 1 0 1 0 0 0 0 0 0 0 0 1 1 0 0 1 0 1 1 0 1
769	0 1 0 1 0 0 0 0 0 1 1 1 1 0 1 1 1 0 1 0 0 1
770	0 1 0 1 0 0 0 0 1 1 0 1 0 1 0 1 0 0 0 0 0 0
771	0 1 0 1 0 0 0 0 1 0 1 0 0 0 1 0 1 0 0 1 0 0
772	0 1 0 1 0 0 0 0 1 1 0 0 1 1 1 1 0 1 1 0 1 1 0
773	0 1 0 1 0 0 0 0 1 1 1 1 0 1 0 0 1 1 1 0 0 1 0
774	0 1 0 1 0 0 0 0 1 0 1 0 0 0 1 1 1 1 1 1 0 1 1
775	0 1 0 1 0 0 0 0 1 0 0 1 1 0 0 0 0 1 1 1 1 1 1
776	0 1 0 1 0 0 0 1 1 0 0 0 0 1 0 0 0 0 1 1 0 1 0
777	0 1 0 1 0 0 0 1 1 0 1 1 1 1 1 1 1 0 1 1 1 1 0
778	0 1 0 1 0 0 0 1 1 1 1 0 1 0 0 0 1 0 1 0 1 1 1
779	0 1 0 1 0 0 0 1 1 0 1 0 0 1 0 0 0 1 0 0 1 1
780	0 1 0 1 0 0 0 1 0 1 0 0 1 1 0 1 0 0 0 0 0 0 1
781	0 1 0 1 0 0 0 1 0 1 1 1 0 1 1 0 1 0 0 0 1 0 1
782	0 1 0 1 0 0 0 1 0 0 1 0 0 0 0 1 1 0 0 1 1 0 0
783	0 1 0 1 0 0 0 1 0 0 0 1 1 0 1 0 0 0 0 1 0 0 0
784	0 1 0 1 0 0 1 1 0 0 0 0 0 0 1 0 1 0 0 0 0 1 1
785	0 1 0 1 0 0 1 1 0 0 1 1 1 0 0 1 0 0 0 0 1 1 1
786	0 1 0 1 0 0 1 1 0 1 1 0 1 1 1 0 0 0 0 1 1 1 0
787	0 1 0 1 0 0 1 1 0 1 0 1 0 1 0 1 1 0 0 1 0 1 0
788	0 1 0 1 0 0 1 1 1 1 0 0 1 0 1 1 1 0 1 1 0 0 0
789	0 1 0 1 0 0 1 1 1 1 0 0 0 0 1 1 0 0 0 1 1 1 0
790	0 1 0 1 0 0 1 1 1 0 1 0 0 1 1 1 0 1 0 1 0 1
791	0 1 0 1 0 0 1 1 1 0 0 1 1 1 0 0 1 0 1 0 0 0 1
792	0 1 0 1 0 0 1 0 1 0 0 0 0 0 0 0 1 1 1 0 1 0 0
793	0 1 0 1 0 0 1 0 1 0 1 1 1 0 1 1 0 1 1 0 0 0 0
794	0 1 0 1 0 0 1 0 1 1 1 0 1 1 0 0 0 1 1 1 0 0 1
795	0 1 0 1 0 0 1 0 1 1 0 1 0 1 1 1 1 1 1 1 1 0 1
796	0 1 0 1 0 0 1 0 0 1 0 0 1 0 0 1 1 1 0 1 1 1 1
797	0 1 0 1 0 0 1 0 0 1 1 1 0 0 1 0 0 1 0 1 0 1 1
798	0 1 0 1 0 0 1 0 0 0 1 0 0 1 0 1 0 1 0 0 0 1 0
799	0 1 0 1 0 0 1 0 0 0 0 1 1 1 1 0 1 1 0 0 1 1 0

FIG.17P

TITLE: TRACK IDENTIFICATION CODEWORDS HAVING MULTIPLE BIT ERROR
CORRECTION CAPABILITY AND GENERALIZED GRAY CODE PROPERTY
INVENTOR: JAI N. SUBRAHMANYAM
ATTY DOCKET NUMBER: K35A1290

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TID	CODEWORD (23,11)
800	0 1 0 1 0 1 1 0 0 0 0 0 1 1 1 1 1 1 1 0 0 0 1
801	0 1 0 1 0 1 1 0 0 0 1 1 0 1 0 0 0 1 1 0 1 0 1
802	0 1 0 1 0 1 1 0 0 1 1 0 0 0 1 1 0 1 1 1 1 0 0
803	0 1 0 1 0 1 1 0 0 1 0 1 1 0 0 0 1 1 1 1 0 0 0
804	0 1 0 1 0 1 1 0 1 1 0 0 0 1 1 0 1 1 0 1 0 1 0
805	0 1 0 1 0 1 1 0 1 1 1 1 1 0 1 0 1 0 1 1 1 0
806	0 1 0 1 0 1 1 0 1 0 1 0 1 0 1 0 0 1 0 0 1 1 1
807	0 1 0 1 0 1 1 0 1 0 0 1 0 0 0 1 1 1 0 0 0 1 1
808	0 1 0 1 0 1 1 1 1 0 0 0 1 1 0 1 1 0 0 0 1 1 0
809	0 1 0 1 0 1 1 1 0 1 1 0 1 1 0 0 0 0 0 0 0 1 0
810	0 1 0 1 0 1 1 1 1 1 0 0 0 0 1 0 0 0 1 0 1 1
811	0 1 0 1 0 1 1 1 1 0 1 1 0 1 0 1 0 0 1 1 1 1
812	0 1 0 1 0 1 1 1 0 1 0 0 0 1 0 0 1 0 1 1 1 0 1
813	0 1 0 1 0 1 1 1 0 1 1 1 1 1 1 0 0 1 1 0 0 1
814	0 1 0 1 0 1 1 1 0 0 1 0 1 0 0 0 0 0 1 0 0 0 0
815	0 1 0 1 0 1 1 1 0 0 0 1 0 0 1 1 1 0 1 0 1 0 0
816	0 1 0 1 0 1 0 1 0 0 0 0 1 0 1 1 0 0 1 1 1 1 1
817	0 1 0 1 0 1 0 1 0 0 1 1 0 0 0 0 1 0 1 1 0 1 1
818	0 1 0 1 0 1 0 1 0 1 1 0 0 1 1 1 1 0 1 0 0 1 0
819	0 1 0 1 0 1 0 1 0 1 0 1 1 1 0 0 0 0 1 0 1 1 0
820	0 1 0 1 0 1 0 1 1 1 0 0 0 1 0 0 0 0 0 1 0 0
821	0 1 0 1 0 1 0 1 1 1 1 1 0 0 1 1 0 0 0 0 0 0
822	0 1 0 1 0 1 0 1 1 0 1 0 1 1 1 0 1 0 0 1 0 0 1
823	0 1 0 1 0 1 0 1 1 0 0 1 0 1 0 1 0 0 0 1 1 0 1
824	0 1 0 1 0 1 0 0 1 0 0 0 1 0 0 1 0 1 0 1 0 0 0
825	0 1 0 1 0 1 0 0 1 0 1 1 0 0 1 0 1 1 0 1 1 0 0
826	0 1 0 1 0 1 0 0 1 1 1 0 0 1 0 1 1 1 0 0 1 0 1
827	0 1 0 1 0 1 0 0 1 1 0 1 1 1 1 0 0 1 0 0 0 0 1
828	0 1 0 1 0 1 0 0 0 1 0 0 0 0 0 0 0 0 1 1 0 0 1 1
829	0 1 0 1 0 1 0 0 0 1 1 1 1 0 1 1 1 1 0 1 1 1
830	0 1 0 1 0 1 0 0 0 0 1 0 1 1 0 0 1 1 1 1 1 1 0
831	0 1 0 1 0 1 0 0 0 0 0 1 0 1 1 1 0 1 1 1 0 1 0
832	0 1 0 1 1 1 0 0 0 0 0 0 1 0 1 0 0 1 0 1 0 0
833	0 1 0 1 1 1 0 0 0 0 1 1 1 1 0 1 0 1 0 0 0 0
834	0 1 0 1 1 1 0 0 0 1 1 0 1 0 0 1 1 0 1 1 0 0 1
835	0 1 0 1 1 1 0 0 0 1 0 1 0 0 1 0 0 0 1 1 1 0 1
836	0 1 0 1 1 1 0 0 1 1 0 0 1 1 0 0 0 0 0 1 1 1 1
837	0 1 0 1 1 1 0 0 1 1 1 1 0 1 1 1 1 0 0 1 0 1 1
838	0 1 0 1 1 1 0 0 1 0 1 0 0 0 0 0 1 0 0 0 0 1 0
839	0 1 0 1 1 1 0 0 1 0 0 0 1 1 0 1 1 0 0 0 1 1 0
840	0 1 0 1 1 1 0 1 1 0 0 0 0 1 1 1 0 1 0 0 0 1 1
841	0 1 0 1 1 1 0 1 1 0 1 1 1 1 0 0 1 1 0 0 1 1 1
842	0 1 0 1 1 1 0 1 1 1 1 0 1 0 1 1 1 1 0 1 1 1 0
843	0 1 0 1 1 1 0 1 1 1 0 1 0 0 0 0 0 1 0 1 0 1 0
844	0 1 0 1 1 1 0 1 0 1 0 0 1 1 1 0 0 1 1 1 0 0 0
845	0 1 0 1 1 1 0 1 0 1 1 1 0 1 0 1 1 1 1 1 1 0 0
846	0 1 0 1 1 1 0 1 0 0 1 0 0 0 1 0 1 1 1 0 1 0 1
847	0 1 0 1 1 1 0 1 0 0 0 1 1 0 0 1 0 1 1 0 0 0 1
848	0 1 0 1 1 1 1 0 0 0 0 0 0 0 1 1 1 1 0 1 0
849	0 1 0 1 1 1 1 0 0 1 1 1 0 1 0 0 1 1 1 1 1 0

FIG.17Q

TID	CODEWORD (23,11)
850	0 1 0 1 1 1 1 1 0 1 1 0 1 1 0 1 0 1 1 0 1 1 1
851	0 1 0 1 1 1 1 1 0 1 0 1 0 1 1 0 1 1 1 0 0 1 1
852	0 1 0 1 1 1 1 1 1 1 0 0 1 0 0 0 1 1 0 0 0 0 1
853	0 1 0 1 1 1 1 1 1 1 1 1 0 0 1 1 0 1 0 0 1 0 1
854	0 1 0 1 1 1 1 1 1 0 1 0 0 1 0 0 0 1 0 1 1 0 0
855	0 1 0 1 1 1 1 1 1 0 0 1 1 1 1 1 1 1 0 1 0 0 0
856	0 1 0 1 1 1 1 0 1 0 0 0 0 0 1 1 1 0 0 1 1 0 1
857	0 1 0 1 1 1 1 0 1 0 1 1 1 0 0 0 0 0 1 0 0 1
858	0 1 0 1 1 1 1 0 1 1 1 0 1 1 1 1 0 0 0 0 0 0 0
859	0 1 0 1 1 1 1 0 1 1 0 1 0 1 0 0 1 0 0 0 1 0 0
860	0 1 0 1 1 1 1 0 0 1 0 0 1 0 1 0 1 0 1 0 1 1 0
861	0 1 0 1 1 1 0 0 1 1 1 0 0 0 1 0 0 1 0 0 1 0
862	0 1 0 1 1 1 0 0 0 1 0 0 1 1 0 0 0 1 1 0 1 1
863	0 1 0 1 1 1 0 0 0 0 1 1 1 0 1 1 0 1 1 1 1 1
864	0 1 0 1 1 0 1 0 0 0 0 0 1 1 0 0 1 0 0 1 0 0 0
865	0 1 0 1 1 0 1 0 0 0 1 1 0 1 1 1 0 0 0 1 1 0 0
866	0 1 0 1 1 0 1 0 0 1 1 0 0 0 0 0 0 0 0 1 0 1
867	0 1 0 1 1 0 1 0 0 0 1 0 1 1 0 1 1 1 0 0 0 0 1
868	0 1 0 1 1 0 1 0 1 1 0 0 0 1 0 1 1 0 1 0 0 1 1
869	0 1 0 1 1 0 1 0 1 1 1 1 1 1 1 0 0 0 1 0 1 1 1
870	0 1 0 1 1 0 1 0 1 0 1 0 1 0 0 1 0 0 1 1 1 1 0
871	0 1 0 1 1 0 1 0 1 0 0 1 0 0 1 0 1 0 1 1 0 1 0
872	0 1 0 1 1 0 1 1 1 0 0 0 1 1 1 0 1 1 1 1 1 1 1
873	0 1 0 1 1 0 1 1 1 0 1 1 0 1 0 1 0 1 1 1 0 1 1
874	0 1 0 1 1 0 1 1 1 1 0 0 0 1 0 0 1 1 0 0 1 0
875	0 1 0 1 1 0 1 1 1 1 0 1 1 0 0 1 1 1 1 0 1 1 0
876	0 1 0 1 1 0 1 1 0 1 0 0 0 1 1 1 1 0 0 1 0 0
877	0 1 0 1 1 0 1 1 0 1 1 1 1 1 0 0 0 1 0 0 0 0 0
878	0 1 0 1 1 0 1 1 0 0 1 0 1 0 1 1 0 1 0 1 0 0 1
879	0 1 0 1 1 0 1 1 0 0 0 1 0 0 0 0 1 1 0 1 1 0 1
880	0 1 0 1 1 0 0 1 0 0 0 0 0 1 0 0 0 0 0 1 1 1 0
881	0 1 0 1 1 0 0 1 0 0 1 1 0 0 1 1 1 1 0 0 0 1 0
882	0 1 0 1 1 0 0 1 0 1 1 0 0 1 0 0 1 1 0 1 0 1 1
883	0 1 0 1 1 0 0 1 0 1 0 1 1 1 1 1 0 1 0 1 1 1 1
884	0 1 0 1 1 0 0 1 1 1 0 0 0 0 1 0 1 1 1 1 0 1
885	0 1 0 1 1 0 0 1 1 1 1 1 1 0 1 0 1 1 1 1 0 0 1
886	0 1 0 1 1 0 0 1 1 0 1 0 1 1 0 1 1 1 1 0 0 0 0
887	0 1 0 1 1 0 0 1 1 0 0 1 0 1 1 0 0 1 1 0 1 0 0
888	0 1 0 1 1 0 0 0 1 0 0 0 1 0 1 0 0 0 1 0 0 0 1
889	0 1 0 1 1 0 0 0 1 0 1 1 0 0 0 1 1 0 1 0 1 0 1
890	0 1 0 1 1 0 0 0 1 1 1 0 0 1 1 0 1 0 1 1 1 0 0
891	0 1 0 1 1 0 0 0 1 1 0 1 1 1 0 1 0 0 1 1 0 0 0
892	0 1 0 1 1 0 0 0 1 0 0 0 0 1 1 0 0 0 1 0 1 0
893	0 1 0 1 1 0 0 0 1 1 1 1 0 0 0 1 0 0 1 1 1 0
894	0 1 0 1 1 0 0 0 0 0 1 0 1 1 1 1 0 0 0 1 1 1
895	0 1 0 1 1 0 0 0 0 0 1 0 1 0 0 0 0 0 0 0 1 1
896	0 1 0 0 1 0 0 0 0 0 0 0 0 0 0 1 0 1 1 1 1 1
897	0 1 0 0 1 0 0 0 0 1 1 1 0 1 1 0 0 1 1 0 1 1
898	0 1 0 0 1 0 0 0 0 1 1 0 1 1 0 0 0 0 1 0 0 1 0
899	0 1 0 0 1 0 0 0 0 1 0 1 0 1 1 1 1 0 1 0 1 1 0

FIG.17R

TITLE: TRACK IDENTIFICATION CODEWORDS HAVING MULTIPLE BIT ERROR
CORRECTION CAPABILITY AND GENERALIZED GRAY CODE PROPERTY
INVENTOR: JAI N. SUBRAHMANYAM
ATTY DOCKET NUMBER: K35A1290

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TID	CODEWORD (23,11)
900	0 1 0 0 1 0 0 0 1 1 0 0 1 0 0 1 1 0 0 0 1 0 0
901	0 1 0 0 1 0 0 0 1 1 1 1 0 0 1 0 0 0 0 0 0 0 0
902	0 1 0 0 1 0 0 0 1 0 1 0 0 1 0 1 0 0 0 1 0 0 1
903	0 1 0 0 1 0 0 0 1 0 0 1 1 1 1 0 1 0 0 1 1 0 1
904	0 1 0 0 1 0 0 1 1 0 0 0 0 0 1 0 1 1 0 1 0 0 0
905	0 1 0 0 1 0 0 1 1 0 1 1 1 0 0 1 0 1 0 1 1 0 0
906	0 1 0 0 1 0 0 1 1 1 1 0 1 1 1 0 0 1 0 0 1 0 1
907	0 1 0 0 1 0 0 1 1 1 0 1 0 1 0 1 1 1 0 0 0 0 1
908	0 1 0 0 1 0 0 1 0 1 0 0 1 0 1 1 1 1 1 0 0 1 1
909	0 1 0 0 1 0 0 1 0 1 1 1 0 0 0 0 0 1 1 0 1 1 1
910	0 1 0 0 1 0 0 1 0 0 1 0 0 1 1 1 0 1 1 1 1 1 0
911	0 1 0 0 1 0 0 1 0 0 0 1 1 1 0 0 1 1 1 1 0 1 0
912	0 1 0 0 1 0 1 1 0 0 0 0 0 1 0 0 0 1 1 0 0 0 1
913	0 1 0 0 1 0 1 1 0 0 1 1 1 1 1 1 1 1 1 0 1 0 1
914	0 1 0 0 1 0 1 1 0 1 1 0 1 0 0 0 1 1 1 1 1 0 0
915	0 1 0 0 1 0 1 1 0 1 0 1 0 0 1 1 0 1 1 1 0 0 0
916	0 1 0 0 1 0 1 1 1 1 0 0 1 1 0 1 0 1 0 1 0 1 0
917	0 1 0 0 1 0 1 1 1 1 1 1 0 1 1 0 1 1 0 1 1 1 0
918	0 1 0 0 1 0 1 1 1 0 1 0 0 0 0 1 1 1 0 0 1 1 1
919	0 1 0 0 1 0 1 1 1 0 0 1 1 0 1 0 0 0 1 0 0 1 1
920	0 1 0 0 1 0 1 0 1 0 0 0 0 1 1 0 0 0 0 0 1 1 0
921	0 1 0 0 1 0 1 0 1 0 1 1 1 1 0 1 1 0 0 0 0 1 0
922	0 1 0 0 1 0 1 0 1 1 1 0 1 0 1 0 1 0 0 1 0 1 1
923	0 1 0 0 1 0 1 0 1 1 0 1 0 0 0 1 0 0 0 1 1 1 1
924	0 1 0 0 1 0 1 0 0 1 0 0 1 1 1 1 0 0 1 1 1 0 1
925	0 1 0 0 1 0 1 0 0 1 1 1 0 1 0 0 1 0 1 1 0 0 1
926	0 1 0 0 1 0 1 0 0 0 1 0 0 0 1 1 1 0 1 0 0 0 0
927	0 1 0 0 1 0 1 0 0 0 0 1 1 0 0 0 0 0 1 0 1 0 0
928	0 1 0 0 1 1 1 0 0 0 0 0 1 0 0 1 0 0 0 0 0 1 1
929	0 1 0 0 1 1 1 0 0 0 1 1 0 0 1 0 1 0 0 0 1 1 1
930	0 1 0 0 1 1 1 0 0 1 1 0 0 1 0 1 1 0 0 1 1 1 0
931	0 1 0 0 1 1 1 0 0 1 0 1 1 1 1 0 0 0 0 1 0 1 0
932	0 1 0 0 1 1 1 0 1 1 0 0 0 0 0 0 0 0 1 1 0 0 0
933	0 1 0 0 1 1 1 0 1 1 1 1 1 0 1 1 1 0 1 1 1 0 0
934	0 1 0 0 1 1 1 0 1 0 1 0 1 1 0 0 1 0 1 0 1 0 1
935	0 1 0 0 1 1 1 0 1 0 0 1 0 1 1 1 0 0 1 0 0 0 1
936	0 1 0 0 1 1 1 1 1 0 0 0 1 0 1 1 0 1 1 0 1 0 0
937	0 1 0 0 1 1 1 1 1 0 1 1 0 0 0 0 1 1 1 0 0 0 0
938	0 1 0 0 1 1 1 1 0 0 1 1 0 0 1 1 1 1 1 1 0 0 1
939	0 1 0 0 1 1 1 1 1 1 0 1 1 1 0 0 0 1 1 1 0 1
940	0 1 0 0 1 1 1 1 0 1 0 0 0 0 1 0 0 1 0 1 1 1 1
941	0 1 0 0 1 1 1 1 0 1 1 1 1 0 0 1 1 1 0 1 0 1 1
942	0 1 0 0 1 1 1 1 0 0 1 0 1 1 1 0 1 1 0 0 0 1 0
943	0 1 0 0 1 1 1 1 0 0 0 1 0 1 0 1 0 1 0 0 1 1 0
944	0 1 0 0 1 1 0 1 0 0 0 0 1 1 0 1 1 1 0 1 1 0 1
945	0 1 0 0 1 1 0 1 0 0 1 1 0 1 1 0 0 1 0 1 0 0 1
946	0 1 0 0 1 1 0 1 0 1 1 0 0 0 0 1 0 1 0 0 0 0 0
947	0 1 0 0 1 1 0 1 0 1 0 1 1 0 1 0 1 1 0 0 1 0 0
948	0 1 0 0 1 1 0 1 1 1 0 0 0 1 0 0 1 1 1 0 1 1 0
949	0 1 0 0 1 1 0 1 1 1 1 1 1 1 1 1 0 1 1 0 0 1 0

FIG.17S

TID	CODEWORD (23,11)
950	0 1 0 0 1 1 0 1 1 0 1 0 1 0 0 0 0 1 1 1 0 1 1
951	0 1 0 0 1 1 0 1 1 0 0 1 0 0 1 1 1 1 1 1 1 1 1
952	0 1 0 0 1 1 0 0 1 0 0 0 1 1 1 1 1 0 1 1 0 1 0
953	0 1 0 0 1 1 0 0 1 0 1 1 0 1 0 0 0 0 1 1 1 1 0
954	0 1 0 0 1 1 0 0 1 1 1 0 0 0 1 1 0 0 1 0 1 1 1
955	0 1 0 0 1 1 0 0 1 1 0 1 1 0 0 0 1 0 1 0 0 1 1
956	0 1 0 0 1 1 0 0 0 1 0 0 0 1 1 0 1 0 0 0 0 0 1
957	0 1 0 0 1 1 0 0 0 1 1 1 1 0 1 0 0 0 0 0 1 0 1
958	0 1 0 0 1 1 0 0 0 0 1 0 1 0 1 0 0 0 0 1 1 0 0
959	0 1 0 0 1 1 0 0 0 0 0 1 0 0 0 1 1 0 0 1 0 0 0
960	0 1 0 0 0 1 0 0 0 0 0 0 0 0 0 1 1 1 0 0 1 1 0
961	0 1 0 0 0 1 0 0 0 0 1 1 1 0 0 0 0 1 0 0 0 1 0
962	0 1 0 0 0 1 0 0 0 1 1 0 1 1 1 1 0 1 0 1 0 1 1
963	0 1 0 0 0 1 0 0 0 1 0 1 0 1 0 0 1 1 0 1 1 1 1
964	0 1 0 0 0 1 0 0 1 1 0 0 1 0 1 0 1 1 1 1 1 0 1
965	0 1 0 0 0 1 0 0 1 1 1 1 0 0 0 1 0 1 1 1 0 0 1
966	0 1 0 0 0 1 0 0 1 0 1 0 0 1 1 0 0 1 1 0 0 0 0
967	0 1 0 0 0 1 0 0 1 0 0 1 1 1 0 1 1 1 1 0 1 0 0
968	0 1 0 0 0 1 0 1 1 0 0 0 0 0 0 1 1 0 1 0 0 0 1
969	0 1 0 0 0 1 0 1 1 0 1 1 1 1 0 1 0 0 1 0 1 0 1
970	0 1 0 0 0 1 0 1 1 1 0 1 0 1 1 0 1 0 0 1 1 1 0
971	0 1 0 0 0 1 0 1 1 1 1 0 1 1 0 1 0 0 1 1 0 0 0
972	0 1 0 0 0 1 0 1 0 1 0 0 1 0 0 0 1 0 0 1 0 1 0
973	0 1 0 0 0 1 0 1 0 1 1 1 0 0 1 1 0 0 0 1 1 1 0
974	0 1 0 0 0 1 0 1 0 0 1 0 0 1 0 0 0 0 0 0 1 1 1
975	0 1 0 0 0 1 0 1 0 0 0 1 1 1 1 1 0 0 0 0 0 1 1
976	0 1 0 0 0 1 1 1 0 0 0 0 0 1 1 1 0 0 0 1 0 0 0
977	0 1 0 0 0 1 1 1 0 0 1 1 1 1 0 0 1 0 0 1 1 0 0
978	0 1 0 0 0 1 1 1 0 1 1 0 1 0 1 1 1 0 0 0 1 0 1
979	0 1 0 0 0 1 1 1 0 1 0 1 0 0 0 0 0 0 0 0 0 0 1
980	0 1 0 0 0 1 1 1 1 1 0 0 1 1 1 0 0 0 1 0 0 1 1
981	0 1 0 0 0 1 1 1 1 1 1 1 0 1 1 0 1 0 1 0 1 1 1
982	0 1 0 0 0 1 1 1 1 0 1 0 0 0 1 0 1 0 1 1 1 1 0
983	0 1 0 0 0 1 1 1 1 0 0 1 1 0 0 1 0 0 1 1 0 1 0
984	0 1 0 0 0 1 1 0 1 0 0 0 0 1 0 1 0 1 1 1 1 1 1
985	0 1 0 0 0 1 1 0 1 0 1 1 1 1 1 0 1 1 1 1 0 1 1
986	0 1 0 0 0 1 1 0 1 1 1 0 1 0 0 1 1 1 1 0 0 1 0
987	0 1 0 0 0 1 1 0 1 1 0 1 0 0 1 0 0 1 1 0 1 1 0
988	0 1 0 0 0 1 1 0 0 1 0 0 1 1 0 0 0 1 0 0 1 0 0
989	0 1 0 0 0 1 1 0 0 1 1 1 0 1 1 1 1 1 0 0 0 0 0
990	0 1 0 0 0 1 1 0 0 0 1 0 0 0 0 0 1 1 0 1 0 0 1
991	0 1 0 0 0 1 1 0 0 0 0 1 1 0 1 1 0 1 0 1 1 0 1
992	0 1 0 0 0 0 1 0 0 0 0 0 1 0 1 0 0 1 1 1 0 1 0
993	0 1 0 0 0 0 1 0 0 0 1 1 0 0 0 1 1 1 1 1 1 1 0
994	0 1 0 0 0 0 1 0 0 1 1 0 0 1 1 0 1 1 1 0 1 1 1
995	0 1 0 0 0 0 1 0 0 1 0 1 1 1 0 1 0 1 1 0 0 1 1
996	0 1 0 0 0 0 1 0 1 1 0 0 0 0 1 1 0 1 0 0 0 0 1
997	0 1 0 0 0 0 1 0 1 1 1 1 1 0 0 0 1 1 0 0 1 0 1
998	0 1 0 0 0 0 1 0 1 0 1 0 1 1 1 1 1 1 0 1 1 0 0
999	0 1 0 0 0 0 1 0 1 0 0 1 0 1 0 0 0 1 0 1 0 0 0

FIG.17 T

TITLE: TRACK IDENTIFICATION CODEWORDS HAVING MULTIPLE BIT ERROR
CORRECTION CAPABILITY AND GENERALIZED GRAY CODE PROPERTY
INVENTOR: JAI N. SUBRAHMANYAM
ATTY DOCKET NUMBER: K35A1290

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TID	CODEWORD (23,11)
1000	0 1 0 0 0 0 1 1 1 0 0 0 1 0 0 0 0 0 1 1 0 1
1001	0 1 0 0 0 0 1 1 1 0 1 1 0 0 1 1 1 0 0 1 0 0 1
1002	0 1 0 0 0 0 1 1 1 1 0 0 1 0 0 1 0 0 0 0 0 0
1003	0 1 0 0 0 0 1 1 1 0 1 1 1 1 1 0 0 0 0 1 0 0
1004	0 1 0 0 0 0 1 1 0 1 0 0 0 0 0 1 0 0 1 0 1 1 0
1005	0 1 0 0 0 0 1 1 0 1 1 1 1 0 1 0 1 0 1 0 0 1 0
1006	0 1 0 0 0 0 1 1 0 0 1 0 1 1 0 1 1 0 1 1 0 1 1
1007	0 1 0 0 0 0 1 1 0 0 0 1 0 1 1 0 0 0 1 1 1 1 1
1008	0 1 0 0 0 0 0 1 0 0 0 0 1 1 1 0 1 0 1 0 1 0 0
1009	0 1 0 0 0 0 0 1 0 0 1 1 0 1 0 1 0 0 1 0 0 0 0
1010	0 1 0 0 0 0 0 1 0 1 1 0 0 0 1 0 0 0 1 1 0 0 1
1011	0 1 0 0 0 0 0 1 0 1 0 1 1 0 0 1 1 0 1 1 1 0 1
1012	0 1 0 0 0 0 1 1 1 0 0 0 1 1 1 1 0 0 1 1 1 1
1013	0 1 0 0 0 0 1 1 1 1 1 1 1 0 0 0 0 0 1 0 1 1
1014	0 1 0 0 0 0 1 1 0 1 0 1 0 1 1 0 0 0 0 0 1 0
1015	0 1 0 0 0 0 1 1 0 0 1 0 0 1 0 0 0 1 0 0 0 1 1 0
1016	0 1 0 0 0 0 0 1 0 0 0 1 1 0 0 1 1 0 0 0 1 1
1017	0 1 0 0 0 0 0 1 0 1 0 1 1 0 1 1 1 0 1 0 0 1 1 1
1018	0 1 0 0 0 0 0 1 1 1 0 0 0 0 0 1 0 1 0 1 1 1 0
1019	0 1 0 0 0 0 0 1 1 0 1 1 0 1 1 1 1 0 1 0 1 0
1020	0 1 0 0 0 0 0 0 1 0 0 0 1 0 1 1 1 1 1 0 0 0
1021	0 1 0 0 0 0 0 0 1 1 1 1 1 1 0 0 1 1 1 1 0 0
1022	0 1 0 0 0 0 0 0 0 1 0 1 0 0 1 0 1 1 0 1 0 1
1023	0 1 0 0 0 0 0 0 0 1 0 0 1 0 1 1 1 0 0 0 1
1024	1 1 0 0 0 0 0 0 0 0 0 1 1 1 0 0 1 0 0 1 1
1025	1 1 0 0 0 0 0 0 0 1 1 1 1 0 0 1 0 1 0 1 1 1
1026	1 1 0 0 0 0 0 0 0 1 1 0 1 0 1 1 1 0 1 1 1 0
1027	1 1 0 0 0 0 0 0 0 1 0 1 0 0 0 0 0 0 1 1 0 1 0
1028	1 1 0 0 0 0 0 0 1 1 0 0 1 1 1 0 0 0 0 1 0 0 0
1029	1 1 0 0 0 0 0 0 1 1 1 0 1 0 1 1 0 0 1 1 0 0
1030	1 1 0 0 0 0 0 0 1 0 1 0 0 0 1 0 1 0 0 0 1 0 1
1031	1 1 0 0 0 0 0 0 1 0 0 1 1 0 0 1 0 0 0 0 0 0 1
1032	1 1 0 0 0 0 0 1 1 0 0 0 0 1 0 1 0 1 0 0 1 0 0
1033	1 1 0 0 0 0 0 1 1 0 1 1 1 1 1 0 1 1 0 0 0 0 0
1034	1 1 0 0 0 0 0 1 1 1 1 0 1 0 0 1 1 1 0 1 0 0 1
1035	1 1 0 0 0 0 0 1 1 1 0 1 0 0 1 0 0 1 0 1 1 0 1
1036	1 1 0 0 0 0 0 1 0 1 0 0 1 1 0 0 0 1 1 1 1 1 1
1037	1 1 0 0 0 0 0 1 0 1 1 1 0 1 1 1 1 1 1 0 1 1
1038	1 1 0 0 0 0 0 1 0 0 1 0 0 1 1 0 0 0 0 1 1 0 0 1 0
1039	1 1 0 0 0 0 0 1 0 0 0 1 1 0 1 1 0 1 1 0 1 1 0
1040	1 1 0 0 0 0 1 1 0 0 0 0 0 0 1 1 1 1 1 1 0 1
1041	1 1 0 0 0 0 1 1 0 0 1 1 1 0 0 0 0 1 1 1 0 0 1
1042	1 1 0 0 0 0 1 1 0 1 1 0 1 1 1 1 0 1 1 0 0 0 0
1043	1 1 0 0 0 0 1 1 0 1 0 1 0 1 0 0 1 1 1 0 1 0 0
1044	1 1 0 0 0 0 1 1 1 1 0 0 1 0 1 0 1 1 0 0 1 1 0
1045	1 1 0 0 0 0 1 1 1 1 1 1 0 0 0 1 0 1 0 0 0 1 0
1046	1 1 0 0 0 0 1 1 1 0 1 0 0 1 1 0 0 1 0 1 0 1 1
1047	1 1 0 0 0 0 1 1 1 0 0 1 1 1 0 1 1 1 1 0 1 1 1
1048	1 1 0 0 0 0 1 0 1 0 0 0 0 0 1 1 0 0 1 0 1 0
1049	1 1 0 0 0 0 1 0 1 0 1 1 1 0 1 0 0 0 0 1 1 1 0

TID	CODEWORD (23,11)
1050	1 1 0 0 0 0 1 0 1 1 1 0 1 1 0 1 0 0 0 0 1 1 1
1051	1 1 0 0 0 0 1 0 1 1 0 1 0 1 1 0 1 0 0 0 0 1 1
1052	1 1 0 0 0 0 1 0 0 1 0 0 1 0 0 0 1 0 1 0 0 0 1
1053	1 1 0 0 0 0 1 0 0 1 1 1 0 0 1 1 0 0 1 0 1 0 1
1054	1 1 0 0 0 0 1 0 0 1 0 0 1 0 0 0 0 1 1 1 0 0
1055	1 1 0 0 0 0 1 0 0 0 0 1 1 1 1 1 0 1 1 0 0 0
1056	1 1 0 0 0 1 1 0 0 0 0 0 1 1 1 0 1 0 0 1 1 1 1
1057	1 1 0 0 0 1 1 0 0 0 1 1 0 1 0 1 0 0 0 1 0 1 1
1058	1 1 0 0 0 1 1 0 0 1 1 0 0 0 1 0 0 0 0 0 0 1 0
1059	1 1 0 0 0 1 1 0 0 1 0 1 1 0 0 1 1 0 0 0 1 1 0
1060	1 1 0 0 0 1 1 0 1 1 0 0 0 1 1 1 1 0 1 0 1 0 0
1061	1 1 0 0 0 1 1 0 1 1 1 1 1 1 0 0 0 0 1 0 0 0 0
1062	1 1 0 0 0 1 1 0 1 0 1 0 1 0 1 1 0 0 1 1 0 0 1
1063	1 1 0 0 0 1 1 0 1 0 0 1 0 0 0 0 1 0 1 1 1 0 1
1064	1 1 0 0 0 1 1 1 1 0 0 0 1 1 0 0 1 1 1 1 0 0 0
1065	1 1 0 0 0 1 1 1 1 0 1 1 0 1 1 1 0 1 1 1 1 0 0
1066	1 1 0 0 0 1 1 1 1 1 0 0 0 0 0 0 1 1 0 1 0 1
1067	1 1 0 0 0 1 1 1 1 1 0 1 1 0 1 1 1 1 0 0 0 1
1068	1 1 0 0 0 1 1 1 0 1 0 0 0 1 0 1 1 1 0 0 0 1 1
1069	1 1 0 0 0 1 1 1 0 1 1 1 1 1 0 1 0 0 1 0 0 1 1 1
1070	1 1 0 0 0 1 1 1 0 0 1 0 1 0 0 1 0 0 1 0 1 1 0
1071	1 1 0 0 0 1 1 1 0 0 0 1 0 0 1 0 1 1 0 1 0 1 0
1072	1 1 0 0 0 1 0 1 0 0 0 0 1 0 1 0 0 1 0 0 0 0 1
1073	1 1 0 0 0 1 0 1 0 0 1 1 0 0 0 1 1 1 0 0 1 0 1
1074	1 1 0 0 0 1 0 1 0 1 1 0 0 1 1 0 1 1 0 1 1 0 0
1075	1 1 0 0 0 1 0 1 0 1 0 1 1 1 0 1 0 1 0 1 0 0 0
1076	1 1 0 0 0 1 0 1 1 1 0 0 0 0 1 1 0 1 1 1 0 1 0
1077	1 1 0 0 0 1 0 1 1 1 1 1 0 0 0 1 1 1 1 1 1 0
1078	1 1 0 0 0 1 0 1 1 0 1 0 1 1 1 1 1 1 0 1 1 1
1079	1 1 0 0 0 1 0 1 1 0 0 1 0 1 0 0 0 1 1 0 0 1 1
1080	1 1 0 0 0 1 0 0 1 0 0 0 1 0 0 0 0 1 0 1 1 0
1081	1 1 0 0 0 1 0 0 1 0 1 1 0 0 1 1 1 0 1 0 0 1 0
1082	1 1 0 0 0 1 0 0 1 1 1 0 0 1 0 0 1 0 1 1 0 1 1
1083	1 1 0 0 0 1 0 0 1 1 0 1 1 1 1 0 0 1 1 1 1 1
1084	1 1 0 0 1 0 0 0 1 0 0 0 0 1 0 0 0 1 1 0 1
1085	1 1 0 0 0 1 0 0 0 1 1 1 1 0 1 0 1 0 0 1 0 0 1
1086	1 1 0 0 0 1 0 0 0 0 1 0 1 1 0 1 1 0 0 0 0 0 0
1087	1 1 0 0 0 1 0 0 0 0 1 0 1 1 0 0 0 0 0 1 0 0
1088	1 1 0 0 1 1 0 0 0 0 0 0 0 1 0 0 0 1 0 1 0 1 0
1089	1 1 0 0 1 1 0 0 0 1 1 1 1 1 1 1 1 0 1 1 1 0
1090	1 1 0 0 1 1 0 0 0 1 1 0 1 0 0 0 1 1 0 0 1 1 1
1091	1 1 0 0 1 1 0 0 0 1 0 1 0 0 1 1 0 1 0 0 0 1 1
1092	1 1 0 0 1 1 0 0 1 1 0 0 1 1 0 1 0 1 1 0 0 0 1
1093	1 1 0 0 1 1 0 0 1 1 1 1 0 1 1 0 1 1 1 0 1 0 1
1094	1 1 0 0 1 1 0 0 1 0 1 0 0 0 0 1 1 1 1 1 0 0
1095	1 1 0 0 1 1 0 0 1 0 0 1 1 0 1 0 0 1 1 1 0 0 0
1096	1 1 0 0 1 1 0 1 1 0 0 0 0 1 1 0 0 0 1 1 1 0 1
1097	1 1 0 0 1 1 0 1 1 0 1 1 1 1 0 1 1 0 1 1 0 0 1
1098	1 1 0 0 1 1 0 1 1 1 1 0 1 0 1 0 1 0 1 0 0 0 0
1099	1 1 0 0 1 1 0 1 1 1 0 1 0 0 0 1 0 0 1 0 1 0 0

FIG.17U   FIG.17 V

TITLE: TRACK IDENTIFICATION CODEWORDS HAVING MULTIPLE BIT ERROR
CORRECTION CAPABILITY AND GENERALIZED GRAY CODE PROPERTY
INVENTOR: JAI N. SUBRAHMANYAM
ATTY DOCKET NUMBER: K35A1290

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TID	CODEWORD (23,11)
1100	1 1 0 0 1 1 0 1 0 1 0 0 1 1 1 1 0 0 0 0 1 1 0
1101	1 1 0 0 1 1 0 1 0 1 1 1 0 1 0 0 1 0 0 0 0 1 0
1102	1 1 0 0 1 1 0 1 0 0 1 0 0 0 1 1 1 0 0 1 0 1 1
1103	1 1 0 0 1 1 0 1 0 0 0 1 1 0 0 0 0 0 0 1 1 1 1
1104	1 1 0 0 1 1 1 1 0 0 0 0 0 0 0 0 1 0 0 0 1 0 0
1105	1 1 0 0 1 1 1 1 0 0 1 1 1 0 1 1 0 0 0 0 0 0 0
1106	1 1 0 0 1 1 1 1 0 1 1 0 1 1 0 0 0 0 0 1 0 0 1
1107	1 1 0 0 1 1 1 1 0 1 0 1 0 1 1 1 1 0 0 1 1 0 1
1108	1 1 0 0 1 1 1 1 1 0 0 1 0 0 1 1 0 1 1 1 1 1
1109	1 1 0 0 1 1 1 1 1 1 1 0 0 1 0 0 0 1 1 0 1 1
1110	1 1 0 0 1 1 1 1 0 1 0 0 1 0 1 0 0 1 0 0 1 0
1111	1 1 0 0 1 1 1 1 0 0 1 1 1 1 0 1 0 1 0 1 1 0
1112	1 1 0 0 1 1 1 0 1 0 0 0 0 0 1 0 1 1 1 0 0 1 1
1113	1 1 0 0 1 1 1 0 1 0 1 1 1 0 0 1 0 1 1 0 1 1 1
1114	1 1 0 0 1 1 1 0 1 1 1 0 1 1 1 0 0 1 1 1 1 1 0
1115	1 1 0 0 1 1 1 0 1 1 0 1 0 1 0 1 1 1 1 1 0 1 0
1116	1 1 0 0 1 1 1 0 0 1 0 0 1 0 1 1 1 1 0 1 0 0 0
1117	1 1 0 0 1 1 1 0 0 0 1 1 1 0 0 1 0 1 0 1 1 0 0
1118	1 1 0 0 1 1 1 0 0 0 1 0 0 1 1 1 0 1 0 0 1 0 1
1119	1 1 0 0 1 1 1 0 0 0 0 1 1 1 0 0 1 1 0 0 0 0 1
1120	1 1 0 0 1 0 1 0 0 0 0 0 1 1 0 1 1 1 1 0 1 1 0
1121	1 1 0 0 1 0 1 0 0 0 1 1 0 1 1 0 0 1 1 0 0 1 0
1122	1 1 0 0 1 0 1 0 0 1 1 0 0 0 0 1 0 1 1 1 0 1 1
1123	1 1 0 0 1 0 1 0 0 1 0 1 1 0 1 0 1 1 1 1 1 1 1
1124	1 1 0 0 1 0 1 0 1 1 0 0 0 1 0 0 1 1 0 1 1 0 1
1125	1 1 0 0 1 0 1 0 1 1 1 1 1 1 1 0 1 0 1 0 0 1
1126	1 1 0 0 1 0 1 0 1 0 1 0 1 0 0 0 0 1 0 0 0 0 0
1127	1 1 0 0 1 0 1 0 1 0 0 1 0 0 1 1 1 1 0 0 1 0 0
1128	1 1 0 0 1 0 1 1 1 0 0 0 1 1 1 1 1 0 0 0 0 0 1
1129	1 1 0 0 1 0 1 1 1 0 1 1 0 1 0 0 0 0 0 0 1 0 1
1130	1 1 0 0 1 0 1 1 1 1 1 0 0 0 1 1 0 0 0 1 1 0 0
1131	1 1 0 0 1 0 1 1 1 1 0 1 1 0 0 0 1 0 0 1 0 0 0
1132	1 1 0 0 1 0 1 1 0 1 0 0 0 1 1 0 1 0 1 1 0 1 0
1133	1 1 0 0 1 0 1 1 0 1 1 1 1 1 0 1 0 0 1 1 1 1 0
1134	1 1 0 0 1 0 1 1 0 0 1 0 1 0 1 0 0 0 1 0 1 1 1
1135	1 1 0 0 1 0 1 1 0 0 0 1 0 0 0 1 1 0 1 0 0 1 1
1136	1 1 0 0 1 0 0 1 0 0 0 0 1 0 0 1 0 0 1 1 0 0 0
1137	1 1 0 0 1 0 0 1 0 0 1 1 0 0 1 0 1 0 1 1 1 0 0
1138	1 1 0 0 1 0 0 1 0 1 1 0 0 1 0 1 1 0 1 0 1 0 1
1139	1 1 0 0 1 0 0 1 0 1 0 1 1 1 0 0 0 1 0 0 0 1
1140	1 1 0 0 1 0 0 1 1 0 0 0 0 0 0 0 0 0 0 0 1 1
1141	1 1 0 0 1 0 0 1 1 1 1 1 0 1 1 1 0 0 0 1 1 1
1142	1 1 0 0 1 0 0 1 1 0 1 0 1 1 0 0 1 0 0 1 1 1 0
1143	1 1 0 0 1 0 0 1 1 0 0 1 0 1 1 1 0 0 0 1 0 1 0
1144	1 1 0 0 1 0 0 0 1 0 0 0 1 0 1 1 0 1 0 1 1 1 1
1145	1 1 0 0 1 0 0 0 1 0 1 1 0 0 0 0 1 1 0 1 0 1 1
1146	1 1 0 0 1 0 0 0 1 1 1 0 0 1 1 1 1 1 0 0 0 1 0
1147	1 1 0 0 1 0 0 0 1 1 1 0 0 1 1 1 0 0 0 0 1 1 0
1148	1 1 0 0 1 0 0 0 0 1 0 0 0 0 1 0 0 1 1 0 1 0 0
1149	1 1 0 0 1 0 0 0 0 1 1 1 1 0 0 1 1 1 1 0 0 0 0

FIG.17X

TID	CODEWORD (23,11)
1150	1 1 0 0 1 0 0 0 0 0 1 0 1 1 1 0 1 1 1 1 0 0 1
1151	1 1 0 0 1 0 0 0 0 0 1 0 1 0 1 0 1 1 1 1 1 0 1
1152	1 1 0 1 1 0 0 0 0 0 0 0 0 0 1 1 1 0 0 0 0 1
1153	1 1 0 1 1 0 0 0 0 1 1 1 0 1 0 0 1 0 0 1 0 1
1154	1 1 0 1 1 0 0 0 0 1 1 0 1 1 0 1 0 1 0 1 1 0 0
1155	1 1 0 1 1 0 0 0 0 1 0 1 0 1 1 0 1 1 0 1 0 0 0
1156	1 1 0 1 1 0 0 0 1 1 0 0 1 0 0 0 1 1 1 1 0 1 0
1157	1 1 0 1 1 0 0 0 1 1 1 1 0 0 1 1 0 1 1 1 1 1 0
1158	1 1 0 1 1 0 0 0 1 0 1 0 0 1 0 0 0 1 1 0 1 1 1
1159	1 1 0 1 1 0 0 1 0 0 1 1 1 1 1 1 1 1 0 0 1 1
1160	1 1 0 1 1 0 0 1 1 0 0 0 0 1 1 1 0 1 0 1 1 0
1161	1 1 0 1 1 0 0 1 1 0 1 1 1 0 0 0 0 1 0 0 1 0
1162	1 1 0 1 1 0 0 1 1 1 1 0 1 1 1 1 0 0 1 1 0 1 1
1163	1 1 0 1 1 0 0 1 1 1 0 1 0 1 0 0 1 0 1 1 1 1 1
1164	1 1 0 1 1 0 0 1 0 1 0 0 1 0 1 0 1 0 0 1 1 0 1
1165	1 1 0 1 1 0 0 1 0 1 1 1 0 0 0 1 0 0 0 1 0 0 1
1166	1 1 0 1 1 0 0 1 0 0 1 0 0 1 1 0 0 0 0 0 0 0 0
1167	1 1 0 1 1 0 0 1 0 0 0 1 1 1 0 1 1 0 0 0 1 0 0
1168	1 1 0 1 1 0 1 1 0 0 0 0 0 1 0 0 1 0 0 1 1 1 1
1169	1 1 0 1 1 0 1 1 0 0 1 1 1 1 1 0 1 0 0 1 0 1 1
1170	1 1 0 1 1 0 1 1 0 1 1 0 1 0 0 1 1 0 0 0 0 1 0
1171	1 1 0 1 1 0 1 1 0 1 0 1 0 0 1 0 0 0 0 0 1 1 0
1172	1 1 0 1 1 0 1 1 1 1 0 0 1 1 0 0 0 0 1 0 1 0 0
1173	1 1 0 1 1 0 1 1 1 1 1 1 0 1 1 1 1 0 1 0 0 0 0
1174	1 1 0 1 1 0 1 1 1 0 1 0 0 0 0 0 1 0 1 1 0 0 1
1175	1 1 0 1 1 0 1 1 1 0 0 1 1 0 1 1 0 0 1 1 1 0 1
1176	1 1 0 1 1 0 1 0 1 0 0 0 0 1 1 1 0 1 1 1 0 0 0
1177	1 1 0 1 1 0 1 0 1 0 1 1 1 1 0 0 1 1 1 1 1 0 0
1178	1 1 0 1 1 0 1 0 1 1 1 0 1 0 1 1 1 1 1 0 1 0 1
1179	1 1 0 1 1 0 1 0 1 1 0 1 0 1 0 0 0 0 1 1 0 0 1
1180	1 1 0 1 1 0 1 0 0 1 0 0 1 1 1 0 0 1 0 0 0 1 1
1181	1 1 0 1 1 0 1 0 0 1 1 1 0 1 0 1 1 1 0 0 1 1 1
1182	1 1 0 1 1 0 1 0 0 0 1 0 0 0 1 0 1 1 0 1 1 1 0
1183	1 1 0 1 1 0 1 0 0 0 0 1 1 0 0 1 0 1 0 1 0 1 0
1184	1 1 0 1 1 1 1 0 0 0 0 0 1 0 0 0 0 1 1 1 1 0 1
1185	1 1 0 1 1 1 1 0 0 0 1 1 0 0 1 1 1 1 1 0 0 1
1186	1 1 0 1 1 1 1 0 0 1 1 0 0 1 0 0 1 1 1 0 0 0 0
1187	1 1 0 1 1 1 1 0 0 1 0 1 1 1 1 1 0 1 1 0 1 0 0
1188	1 1 0 1 1 1 1 0 1 1 0 0 0 0 0 1 0 1 0 0 1 1 0
1189	1 1 0 1 1 1 1 0 1 1 1 1 1 0 1 0 1 1 0 0 0 1 0
1190	1 1 0 1 1 1 1 0 1 0 1 0 1 1 0 1 1 1 0 1 0 1 1
1191	1 1 0 1 1 1 1 0 1 0 0 1 0 1 1 0 0 1 0 1 1 1 1
1192	1 1 0 1 1 1 1 1 1 0 0 0 1 0 1 0 0 0 0 1 0 1 0
1193	1 1 0 1 1 1 1 1 1 0 1 1 0 0 0 1 1 0 0 1 1 1 0
1194	1 1 0 1 1 1 1 1 1 1 1 0 0 1 1 0 1 0 0 0 1 1 1
1195	1 1 0 1 1 1 1 1 1 1 0 1 1 1 0 1 0 0 0 0 0 1 1
1196	1 1 0 1 1 1 1 1 0 1 0 0 0 0 1 1 0 0 1 0 0 0 1
1197	1 1 0 1 1 1 1 1 0 1 1 1 1 0 0 0 1 0 1 0 1 0 1
1198	1 1 0 1 1 1 1 1 0 0 1 0 1 1 1 1 1 0 1 1 1 0 0
1199	1 1 0 1 1 1 1 0 0 0 1 0 1 0 0 0 0 1 1 0 0 0

FIG.17 Y

TITLE: TRACK IDENTIFICATION CODEWORDS HAVING MULTIPLE BIT ERROR
CORRECTION CAPABILITY AND GENERALIZED GRAY CODE PROPERTY
INVENTOR: JAI N. SUBRAHMANYAM
ATTY DOCKET NUMBER: K35A1290

21/30

TID	CODEWORD (23,11)
1200	1 1 0 1 1 1 0 1 0 0 0 0 1 1 0 0 1 0 1 0 0 1 1
1201	1 1 0 1 1 1 0 1 0 0 1 1 0 1 1 1 0 0 1 0 1 1 1
1202	1 1 0 1 1 1 0 1 0 1 1 0 0 0 0 0 0 0 1 1 1 1 0
1203	1 1 0 1 1 1 0 1 0 1 0 1 1 0 1 1 1 0 1 1 0 1 0
1204	1 1 0 1 1 1 0 1 1 1 0 0 0 1 0 1 1 0 0 1 0 0 0
1205	1 1 0 1 1 1 0 1 1 1 1 1 1 1 0 0 0 0 1 1 0 0
1206	1 1 0 1 1 1 0 1 1 0 1 0 1 0 0 1 0 0 0 0 1 0 1
1207	1 1 0 1 1 1 0 0 1 0 0 1 0 0 1 0 1 0 0 0 0 0 1
1208	1 1 0 1 1 1 0 0 1 0 0 0 1 1 1 0 1 1 0 0 1 0 0
1209	1 1 0 1 1 1 0 0 1 0 1 1 0 1 0 1 0 1 0 0 0 0 0
1210	1 1 0 1 1 1 0 0 1 1 1 0 0 0 1 0 0 1 0 1 0 0 1
1211	1 1 0 1 1 1 0 0 1 1 0 1 1 0 0 1 1 1 0 1 1 0 1
1212	1 1 0 1 1 1 0 0 0 1 0 0 0 1 1 1 1 1 1 1 1 1
1213	1 1 0 1 1 1 0 0 0 1 1 1 1 0 0 0 1 1 1 0 1 1
1214	1 1 0 1 1 1 0 0 0 0 1 0 1 0 1 1 0 1 1 0 0 1 0
1215	1 1 0 1 1 1 0 0 0 0 0 1 0 0 0 0 1 1 1 0 1 1 0
1216	1 1 0 1 0 1 0 0 0 0 0 0 0 0 1 0 1 0 1 1 0 0 0
1217	1 1 0 1 0 1 0 0 0 0 1 1 1 0 0 1 0 0 1 1 1 0 0
1218	1 1 0 1 0 1 0 0 0 1 1 0 1 1 1 0 0 0 1 0 1 0 1
1219	1 1 0 1 0 1 0 0 0 1 0 1 0 1 0 1 1 0 1 0 0 0 1
1220	1 1 0 1 0 1 0 0 1 1 0 0 1 0 1 1 1 0 0 0 0 1 1
1221	1 1 0 1 0 1 0 0 1 1 1 1 0 0 0 0 0 0 0 0 1 1 1
1222	1 1 0 1 0 1 0 0 1 0 1 0 0 1 1 1 0 0 0 1 1 1 0
1223	1 1 0 1 0 1 0 0 1 0 0 1 1 1 0 0 1 0 0 1 0 1 0
1224	1 1 0 1 0 1 0 1 1 0 0 0 0 0 0 1 1 0 1 1 1 1
1225	1 1 0 1 0 1 0 1 1 0 1 1 1 0 1 1 0 1 0 1 0 1 1
1226	1 1 0 1 0 1 0 1 1 1 1 0 1 1 0 0 0 1 0 0 0 1 0
1227	1 1 0 1 0 1 0 1 1 0 1 0 1 1 1 1 1 1 0 0 1 0 0
1228	1 1 0 1 0 1 0 1 0 1 0 0 1 0 0 1 0 0 1 1 1 0 0
1229	1 1 0 1 0 1 0 1 0 1 1 1 0 0 1 0 0 1 1 0 0 0 0
1230	1 1 0 1 0 1 0 1 0 0 1 0 0 1 0 1 0 1 1 1 0 0 1
1231	1 1 0 1 0 1 0 1 0 0 0 1 1 1 0 1 1 1 1 1 0 1
1232	1 1 0 1 0 1 1 1 0 0 0 0 0 1 1 0 0 1 1 0 1 1 0
1233	1 1 0 1 0 1 1 1 0 0 1 1 1 1 0 1 1 1 1 0 0 1 0
1234	1 1 0 1 0 1 1 1 0 1 1 0 1 0 1 0 1 1 1 1 0 1 1
1235	1 1 0 1 0 1 1 1 0 1 0 1 0 0 0 1 0 1 1 1 1 1 1
1236	1 1 0 1 0 1 1 1 1 1 0 0 1 1 1 0 1 0 1 1 0 1
1237	1 1 0 1 0 1 1 1 1 1 1 1 0 1 0 1 1 0 1 0 0 1
1238	1 1 0 1 0 1 1 1 1 0 1 0 0 0 1 1 1 1 0 0 0 0 0
1239	1 1 0 1 0 1 1 1 1 0 0 1 1 0 0 0 0 1 0 0 1 0 0
1240	1 1 0 1 0 1 1 0 1 0 0 0 0 1 0 0 0 0 0 0 0 0 1
1241	1 1 0 1 0 1 1 0 1 0 1 1 1 1 1 1 0 0 0 1 0 1
1242	1 1 0 1 0 1 1 0 1 1 1 0 1 0 0 0 1 0 0 1 1 0 0
1243	1 1 0 1 0 1 1 0 1 1 0 1 0 0 1 1 0 0 0 1 0 0 0
1244	1 1 0 1 0 1 1 0 0 1 0 0 1 1 0 1 0 0 1 1 0 1 0
1245	1 1 0 1 0 1 1 0 0 1 1 1 0 1 1 0 1 0 1 1 1 1 0
1246	1 1 0 1 0 1 1 0 0 0 1 0 0 0 0 1 1 0 1 0 1 1 1
1247	1 1 0 1 0 1 1 0 0 0 0 1 1 0 1 0 0 0 1 0 0 1 1
1248	1 1 0 1 0 0 1 0 0 0 0 0 1 0 1 1 0 0 0 1 0 0
1249	1 1 0 1 0 0 1 0 0 0 1 1 0 0 0 0 1 0 0 0 0 0 0

FIG.17 Z

TID	CODEWORD (23,11)
1250	1 1 0 1 0 0 1 0 0 1 1 0 0 1 1 1 1 0 0 1 0 0 1
1251	1 1 0 1 0 0 1 0 0 1 0 1 1 1 0 0 0 0 0 1 1 0 1
1252	1 1 0 1 0 0 1 0 1 1 0 0 0 0 1 0 0 0 1 1 1 1 1
1253	1 1 0 1 0 0 1 0 1 1 1 1 1 0 0 1 1 0 1 1 0 1 1
1254	1 1 0 1 0 0 1 0 1 0 1 0 1 1 1 0 1 0 1 0 0 1 0
1255	1 1 0 1 0 0 1 0 1 0 0 1 0 1 0 1 0 0 1 0 1 1 0
1256	1 1 0 1 0 0 1 1 1 0 0 0 1 0 0 1 0 1 1 0 0 1 1
1257	1 1 0 1 0 0 1 1 1 0 1 1 0 0 1 0 1 1 1 0 1 1 1
1258	1 1 0 1 0 0 1 1 1 1 1 0 0 1 0 1 1 1 1 1 1 1 0
1259	1 1 0 1 0 0 1 1 1 1 0 1 1 1 1 0 0 1 1 1 0 1 0
1260	1 1 0 1 0 0 1 1 0 1 0 0 0 0 0 0 1 0 1 0 0 0
1261	1 1 0 1 0 0 1 1 0 1 1 1 1 0 1 1 1 1 0 1 1 0 0
1262	1 1 0 1 0 0 1 1 0 0 1 0 1 1 0 0 1 1 0 0 1 0 1
1263	1 1 0 1 0 0 1 1 0 0 0 1 0 1 1 1 0 1 0 0 0 0 1
1264	1 1 0 1 0 0 0 1 0 0 0 0 1 1 1 1 1 0 1 0 1 0
1265	1 1 0 1 0 0 0 1 0 0 1 1 0 1 0 0 0 1 0 1 1 1 0
1266	1 1 0 1 0 0 0 1 0 1 1 0 0 0 1 1 0 1 0 0 1 1 1
1267	1 1 0 1 0 0 0 1 0 1 0 1 1 0 0 0 1 1 0 0 0 1 1
1268	1 1 0 1 0 0 0 1 1 1 0 0 0 1 1 0 1 1 1 0 0 0 1
1269	1 1 0 1 0 0 0 1 1 1 1 1 1 1 0 1 0 1 1 0 1 0 1
1270	1 1 0 1 0 0 0 1 1 0 1 0 1 0 1 0 0 1 1 1 1 0 0
1271	1 1 0 1 0 0 0 1 1 0 0 1 0 0 0 1 1 1 1 0 0 0
1272	1 1 0 1 0 0 0 0 1 0 0 0 1 1 0 1 1 0 1 1 1 0 1
1273	1 1 0 1 0 0 0 0 1 0 1 1 0 1 1 0 0 0 1 1 0 0 1
1274	1 1 0 1 0 0 0 0 1 1 1 0 0 0 0 1 0 0 1 0 0 0 0
1275	1 1 0 1 0 0 0 0 1 1 0 1 1 0 1 0 1 0 1 0 1 0 0
1276	1 1 0 1 0 0 0 0 0 1 0 0 0 1 0 0 1 0 0 0 1 1 0
1277	1 1 0 1 0 0 0 0 0 1 1 1 1 1 1 1 0 0 0 0 0 1 0
1278	1 1 0 1 0 0 0 0 0 0 1 0 1 0 0 0 0 0 0 0 1 1 1
1279	1 1 0 1 0 0 0 0 0 0 0 1 0 0 1 1 1 0 0 1 1 1 1
1280	1 1 1 1 0 0 0 0 0 0 0 1 0 1 0 1 1 1 0 1 1 1
1281	1 1 1 1 0 0 0 0 0 1 1 0 0 0 1 0 1 1 0 0 1 1
1282	1 1 1 1 0 0 0 0 1 1 0 0 1 1 0 0 1 1 1 0 1 0
1283	1 1 1 1 0 0 0 0 1 0 1 1 1 0 1 1 1 1 1 1 1 0
1284	1 1 1 1 0 0 0 0 1 1 0 0 0 0 1 1 1 1 0 1 1 0 0
1285	1 1 1 1 0 0 0 0 1 1 1 1 0 0 0 0 1 0 1 0 0 0
1286	1 1 1 1 0 0 0 0 1 0 1 0 1 1 1 1 0 1 0 0 0 0 1
1287	1 1 1 1 0 0 0 0 1 0 0 1 0 1 0 0 1 1 0 0 1 0 1
1288	1 1 1 1 0 0 0 1 1 0 0 0 1 0 0 0 1 0 0 0 0 0 0
1289	1 1 1 1 0 0 0 1 1 0 1 1 0 0 1 1 0 0 0 0 1 0 0
1290	1 1 1 1 0 0 0 1 1 1 1 0 0 1 0 0 0 0 0 1 1 0 1
1291	1 1 1 1 0 0 0 1 1 1 0 1 1 1 1 1 1 0 0 1 0 0 1
1292	1 1 1 1 0 0 0 1 0 1 0 0 0 0 0 1 1 0 1 1 0 1 1
1293	1 1 1 1 0 0 0 1 0 1 1 1 1 0 1 0 0 0 1 1 1 1 1
1294	1 1 1 1 0 0 0 1 0 0 1 0 1 1 0 1 0 0 1 0 1 1 0
1295	1 1 1 1 0 0 0 1 0 0 0 1 0 1 1 0 1 0 1 0 0 1 0
1296	1 1 1 1 0 0 1 1 0 0 0 0 1 1 1 0 0 0 1 1 0 0 1
1297	1 1 1 1 0 0 1 1 0 0 1 1 0 1 0 1 1 0 1 1 1 0 1
1298	1 1 1 1 0 0 1 1 0 1 1 0 0 0 1 0 1 0 1 0 1 0 0
1299	1 1 1 1 0 0 1 1 0 1 0 1 1 0 0 1 0 0 1 0 0 0 0

FIG.17 AA

TITLE: TRACK IDENTIFICATION CODEWORDS HAVING MULTIPLE BIT ERROR
CORRECTION CAPABILITY AND GENERALIZED GRAY CODE PROPERTY
INVENTOR: JAI N. SUBRAHMANYAM
ATTY DOCKET NUMBER: K35A1290

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TID	CODEWORD (23,11)
1300	1 1 1 1 0 0 1 1 1 1 0 0 0 1 1 1 0 0 0 0 0 1 0
1301	1 1 1 1 0 0 1 1 1 1 1 1 1 0 0 1 0 0 0 0 1 1 0
1302	1 1 1 1 0 0 1 1 1 0 1 0 1 0 1 1 1 0 0 1 1 1 1
1303	1 1 1 1 0 0 1 1 1 0 0 1 0 0 0 0 0 0 1 0 1 1
1304	1 1 1 1 0 0 1 0 1 0 0 0 1 1 0 0 0 1 0 1 1 1 0
1305	1 1 1 1 0 0 1 0 1 0 1 1 0 1 1 1 1 1 0 1 0 1 0
1306	1 1 1 1 0 0 1 0 1 1 1 0 0 0 0 1 1 0 0 0 1 1
1307	1 1 1 1 0 0 1 0 1 1 0 1 1 0 1 1 0 1 0 0 1 1 1
1308	1 1 1 1 0 0 1 0 0 1 0 0 0 1 0 1 0 1 1 0 1 0 1
1309	1 1 1 1 0 0 1 0 0 1 1 1 1 1 0 1 1 1 0 0 0 0 1
1310	1 1 1 1 0 0 1 0 0 0 1 0 1 0 0 1 1 1 1 0 0 0
1311	1 1 1 1 0 0 1 0 0 0 0 1 0 0 1 0 0 1 1 1 1 0 0
1312	1 1 1 1 0 1 1 0 0 0 0 0 0 1 1 0 1 0 1 0 1 1
1313	1 1 1 1 0 1 1 0 0 0 1 1 1 0 0 0 1 1 0 1 1 1 1
1314	1 1 1 1 0 1 1 0 0 1 1 0 1 1 1 1 1 1 0 0 1 1 0
1315	1 1 1 1 0 1 1 0 0 1 0 1 0 1 0 0 0 1 0 0 0 1 0
1316	1 1 1 1 0 1 1 0 1 1 0 0 1 0 1 0 0 1 1 0 0 0 0
1317	1 1 1 1 0 1 1 0 1 1 1 1 0 0 0 1 1 1 1 0 1 0 0
1318	1 1 1 1 0 1 1 0 1 0 1 0 0 1 1 0 1 1 1 1 1 0 1
1319	1 1 1 1 0 1 1 0 1 0 0 0 1 1 1 0 1 1 1 1 0 0 1
1320	1 1 1 1 0 1 1 1 0 0 0 0 0 0 1 0 0 1 1 1 0 0
1321	1 1 1 1 0 1 1 1 0 1 1 1 0 1 0 1 0 1 1 0 0 0
1322	1 1 1 1 0 1 1 1 1 1 1 0 1 1 0 1 1 0 1 0 0 0 1
1323	1 1 1 1 0 1 1 1 1 0 1 0 1 1 0 0 0 1 0 1 0 1
1324	1 1 1 1 0 1 1 1 0 1 0 0 1 0 0 0 0 0 0 1 1 1
1325	1 1 1 1 0 1 1 1 0 1 1 1 0 0 1 1 1 0 0 0 0 1 1
1326	1 1 1 1 0 1 1 1 0 0 1 0 0 1 0 0 1 0 0 1 0 1 0
1327	1 1 1 1 0 1 1 1 0 0 0 1 1 1 1 1 0 0 0 1 1 1 0
1328	1 1 1 1 0 1 0 1 0 0 0 0 1 1 1 1 0 0 0 1 0 1
1329	1 1 1 1 0 1 0 1 0 0 1 1 1 0 0 0 0 0 0 0 0 1
1330	1 1 1 1 0 1 0 1 0 1 1 0 1 0 1 1 0 0 0 1 0 0 0
1331	1 1 1 1 0 1 0 1 0 1 0 1 0 0 0 0 1 0 0 1 1 0 0
1332	1 1 1 1 0 1 0 1 1 1 0 0 1 1 1 0 1 0 1 1 1 1 0
1333	1 1 1 1 0 1 0 1 1 1 1 0 1 0 1 0 0 1 1 0 1 0
1334	1 1 1 1 0 1 0 1 1 0 1 0 0 0 1 0 0 0 1 0 0 1 1
1335	1 1 1 1 0 1 0 1 1 0 0 1 1 0 0 1 1 0 1 0 1 1 1
1336	1 1 1 1 0 1 0 0 1 0 0 0 0 1 0 1 1 1 1 0 0 1 0
1337	1 1 1 1 0 1 0 0 1 0 1 1 1 1 1 0 0 1 1 0 1 1 0
1338	1 1 1 1 0 1 0 0 1 0 1 0 0 1 0 1 1 1 1 1 1
1339	1 1 1 1 0 1 0 0 1 1 0 1 0 0 1 0 1 1 1 1 0 1 1
1340	1 1 1 1 0 1 0 0 0 1 0 0 1 1 0 0 1 1 0 1 0 0 1
1341	1 1 1 1 0 1 0 0 0 1 1 1 0 1 1 1 0 1 0 1 1 0 1
1342	1 1 1 1 0 1 0 0 0 0 1 0 0 0 0 0 1 0 0 1 0 0
1343	1 1 1 1 0 1 0 0 0 0 0 1 1 0 1 1 1 1 0 0 0 0 0
1344	1 1 1 1 1 1 0 0 0 0 0 0 1 0 0 1 1 0 0 1 1 1 0
1345	1 1 1 1 1 1 0 0 0 0 1 1 0 0 1 0 0 0 0 1 0 1 0
1346	1 1 1 1 1 1 0 0 0 1 1 0 0 1 0 1 0 0 0 0 0 1 1
1347	1 1 1 1 1 1 0 0 0 1 0 1 1 1 1 0 1 0 0 0 1 1 1
1348	1 1 1 1 1 1 0 0 1 1 0 0 0 0 0 1 0 1 0 1 0 1
1349	1 1 1 1 1 1 0 0 1 1 1 1 0 1 1 0 0 1 0 0 0 1

FIG.17BB

TID	CODEWORD (23,11)
1350	1 1 1 1 1 1 0 0 1 0 1 0 1 1 0 0 0 0 1 1 0 0 0
1351	1 1 1 1 1 1 0 0 1 0 0 1 0 1 1 1 1 0 1 1 1 0 0
1352	1 1 1 1 1 1 0 1 1 0 0 0 1 0 1 1 1 1 1 1 0 0 1
1353	1 1 1 1 1 1 0 1 1 0 1 1 0 0 0 0 0 1 1 1 1 0 1
1354	1 1 1 1 1 1 0 1 1 1 1 0 0 1 1 1 0 1 1 0 1 0 0
1355	1 1 1 1 1 1 0 1 1 1 0 1 1 1 0 0 1 1 1 0 0 0 0
1356	1 1 1 1 1 1 0 1 0 1 0 0 0 1 0 1 1 0 0 0 1 0
1357	1 1 1 1 1 1 0 1 0 1 1 1 1 0 0 1 0 1 0 0 1 1 0
1358	1 1 1 1 1 1 0 1 0 0 1 0 1 1 1 0 0 1 0 1 1 1 1
1359	1 1 1 1 1 1 0 1 0 0 0 0 1 0 1 0 1 1 1 0 1 0 1 1
1360	1 1 1 1 1 1 1 1 0 0 0 0 1 0 1 0 1 1 0 0 0 0 0
1361	1 1 1 1 1 1 1 1 0 0 1 1 0 1 1 0 1 1 0 0 1 0 0
1362	1 1 1 1 1 1 1 1 0 1 1 0 0 0 0 1 1 1 0 1 1 0 1
1363	1 1 1 1 1 1 1 1 0 1 0 1 1 0 1 0 0 1 0 1 0 0 1
1364	1 1 1 1 1 1 1 1 1 0 0 0 1 0 0 0 1 1 1 0 1 1
1365	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1366	1 1 1 1 1 1 1 1 1 0 1 0 1 0 0 0 1 1 1 0 1 1 0
1367	1 1 1 1 1 1 1 1 1 0 0 1 0 0 1 1 0 1 1 0 0 1 0
1368	1 1 1 1 1 1 1 0 1 0 0 0 1 1 1 1 0 0 1 0 1 1 1
1369	1 1 1 1 1 1 1 0 1 0 1 1 0 1 0 0 1 0 1 0 0 1 1
1370	1 1 1 1 1 1 1 0 1 1 0 0 0 1 1 1 0 1 1 0 1 0
1371	1 1 1 1 1 1 1 0 1 1 0 1 1 0 0 1 1 0 0 0 1 1 1 0
1372	1 1 1 1 1 1 1 0 0 1 0 0 0 1 1 0 0 0 0 1 1 0 0
1373	1 1 1 1 1 1 1 0 0 1 1 1 1 0 1 1 0 0 1 0 0 0
1374	1 1 1 1 1 1 1 0 0 0 1 0 1 0 1 0 1 0 0 0 0 0 1
1375	1 1 1 1 1 1 1 0 0 0 0 1 0 0 0 1 0 0 0 0 1 0 1
1376	1 1 1 1 1 0 1 0 0 0 0 0 0 0 0 0 0 1 0 0 1 0
1377	1 1 1 1 1 0 1 0 0 0 1 1 1 0 1 1 1 0 1 0 1 1 0
1378	1 1 1 1 1 0 1 0 0 1 1 0 1 1 0 0 1 0 1 1 1 1 1
1379	1 1 1 1 1 0 1 0 0 1 0 1 1 1 0 0 1 1 0 1 1
1380	1 1 1 1 1 0 1 0 1 1 0 0 1 0 0 1 0 0 0 1 0 0 1
1381	1 1 1 1 1 0 1 0 1 1 1 1 0 0 1 0 1 0 0 1 1 0 1
1382	1 1 1 1 1 0 1 0 1 0 1 0 0 1 0 1 1 0 0 0 1 0 0
1383	1 1 1 1 1 0 1 0 1 0 0 1 1 1 1 0 0 0 0 0 0 0 0
1384	1 1 1 1 1 0 1 1 1 0 0 0 0 1 0 0 1 0 0 1 0 1
1385	1 1 1 1 1 0 1 1 1 0 1 1 1 0 0 1 1 1 0 0 0 0 1
1386	1 1 1 1 1 0 1 1 1 1 1 0 1 1 1 0 1 1 0 1 0 0 0
1387	1 1 1 1 1 0 1 1 1 1 0 1 0 1 0 1 0 1 0 1 1 0 0
1388	1 1 1 1 1 0 1 1 0 1 0 0 1 0 1 1 0 1 1 1 1 1 0
1389	1 1 1 1 1 0 1 1 0 1 1 1 0 0 0 0 1 1 1 1 0 1 0
1390	1 1 1 1 1 0 1 1 0 0 1 0 0 1 1 1 1 1 0 0 0 1 1
1391	1 1 1 1 1 0 1 1 0 0 0 1 1 1 0 0 0 1 1 0 1 1 1
1392	1 1 1 1 1 1 0 0 1 0 0 0 0 0 1 0 0 1 1 1 1 0 0
1393	1 1 1 1 1 1 0 0 1 0 0 1 1 1 1 1 1 0 1 1 1 0 0 0
1394	1 1 1 1 1 1 0 0 1 0 1 1 0 1 0 0 0 0 1 1 0 0 0 1
1395	1 1 1 1 1 1 0 0 1 0 1 0 1 0 0 1 1 1 1 1 0 1 0 1
1396	1 1 1 1 1 1 0 0 1 1 1 0 0 1 1 0 1 1 1 0 0 1 1 1
1397	1 1 1 1 1 1 0 0 1 1 1 1 1 0 1 1 0 0 1 0 0 0 1 1
1398	1 1 1 1 1 1 0 0 1 1 0 1 0 0 0 0 1 0 1 0 1 0 1 0
1399	1 1 1 1 1 1 0 0 1 1 0 0 1 1 0 1 0 1 1 0 1 1 1 0

FIG.17CC

TITLE: TRACK IDENTIFICATION CODEWORDS HAVING MULTIPLE BIT ERROR
CORRECTION CAPABILITY AND GENERALIZED GRAY CODE PROPERTY
INVENTOR: JAI N. SUBRAHMANYAM
ATTY DOCKET NUMBER: K35A1290

23/30

TID	CODEWORD (23,11)
1400	1 1 1 1 1 0 0 0 1 0 0 0 0 1 1 0 1 0 0 1 0 1 1
1401	1 1 1 1 1 0 0 0 1 0 1 1 1 1 0 1 0 0 0 1 1 1 1
1402	1 1 1 1 1 0 0 0 1 1 1 0 1 0 1 0 0 0 0 0 1 1 0
1403	1 1 1 1 1 0 0 0 1 1 0 1 0 0 0 1 1 0 0 0 0 1 0
1404	1 1 1 1 1 0 0 0 0 1 0 0 1 1 1 1 0 1 0 0 0 0 0
1405	1 1 1 1 1 0 0 0 0 1 1 1 0 1 0 0 0 0 1 0 1 0 0
1406	1 1 1 1 1 0 0 0 0 0 1 0 0 0 1 1 0 0 1 1 1 0 1
1407	1 1 1 1 1 0 0 0 0 0 1 1 0 0 0 1 0 1 1 0 0 1
1408	1 1 1 0 1 0 0 0 0 0 0 0 1 1 0 0 0 0 0 0 1 0 1
1409	1 1 1 0 1 0 0 0 0 1 1 0 1 1 1 1 0 0 0 0 0 0 1
1410	1 1 1 0 1 0 0 0 0 1 1 0 0 0 0 0 1 0 0 1 0 0 0
1411	1 1 1 0 1 0 0 0 0 1 0 1 1 0 1 1 0 0 0 1 1 0 0
1412	1 1 1 0 1 0 0 0 1 1 0 0 0 1 0 1 0 0 1 1 1 1 0
1413	1 1 1 0 1 0 0 0 1 1 1 1 1 1 0 1 0 1 1 0 1 0
1414	1 1 1 0 1 0 0 0 1 0 1 0 1 0 0 1 1 0 1 0 0 1 1
1415	1 1 1 0 1 0 0 0 1 0 0 1 0 0 1 0 0 0 1 0 1 1 1
1416	1 1 1 0 1 0 0 1 1 0 0 0 1 1 1 0 0 1 1 0 0 1 0
1417	1 1 1 0 1 0 0 1 1 0 1 1 0 1 0 1 1 1 1 0 1 1 0
1418	1 1 1 0 1 0 0 1 1 1 1 0 0 0 1 0 1 1 1 1 1 1
1419	1 1 1 0 1 0 0 1 1 1 0 1 1 0 0 1 0 1 1 1 0 1 1
1420	1 1 1 0 1 0 0 1 0 1 0 0 0 1 1 1 0 1 0 1 0 0 1
1421	1 1 1 0 1 0 0 1 0 1 1 1 1 1 0 0 1 1 0 1 1 0 1
1422	1 1 1 0 1 0 0 1 0 0 1 0 1 0 1 1 1 1 0 0 1 0 0
1423	1 1 1 0 1 0 0 1 0 0 0 1 0 0 0 0 0 1 0 0 0 0 0
1424	1 1 1 0 1 0 1 1 0 0 0 0 1 0 0 0 1 1 0 1 0 1 1
1425	1 1 1 0 1 0 1 1 0 0 1 1 0 0 1 1 0 1 0 1 1 1 1
1426	1 1 1 0 1 0 1 1 0 1 1 0 0 1 0 0 0 1 0 0 1 1 0
1427	1 1 1 0 1 0 1 1 0 1 0 1 1 1 1 1 1 0 0 0 1 0
1428	1 1 1 0 1 0 1 1 1 1 0 0 0 0 0 1 1 1 0 0 0 0
1429	1 1 1 0 1 0 1 1 1 1 1 1 1 0 1 0 0 1 0 0 1 0 0
1430	1 1 1 0 1 0 1 1 1 0 1 0 1 1 0 1 0 1 1 1 1 0 1
1431	1 1 1 0 1 0 1 1 1 0 0 1 0 1 1 0 1 1 1 1 0 0 1
1432	1 1 1 0 1 0 1 0 1 0 0 0 1 0 1 0 1 0 1 1 1 0 0
1433	1 1 1 0 1 0 1 0 1 0 1 1 0 0 0 1 0 0 1 1 0 0 0
1434	1 1 1 0 1 0 1 0 1 1 1 0 0 1 1 0 0 0 1 0 0 0 1
1435	1 1 1 0 1 0 1 0 1 1 0 1 1 1 0 1 1 0 1 0 1 0 1
1436	1 1 1 0 1 0 1 0 0 1 0 0 0 0 1 1 1 0 0 0 1 1 1
1437	1 1 1 0 1 0 1 0 0 1 1 1 1 0 0 0 0 0 0 0 0 1 1
1438	1 1 1 0 1 0 1 0 0 0 1 0 1 1 1 0 0 0 1 0 0 1 0
1439	1 1 1 0 1 0 1 0 0 0 0 1 0 1 0 0 1 0 0 1 1 1 0
1440	1 1 1 0 1 1 1 0 0 0 0 0 0 1 0 1 1 0 1 1 0 0 1
1441	1 1 1 0 1 1 1 0 0 0 1 1 1 1 0 0 0 1 1 1 0 1
1442	1 1 1 0 1 1 1 0 0 1 1 0 1 0 0 1 0 0 1 0 1 0 0
1443	1 1 1 0 1 1 1 0 0 1 0 1 0 0 1 0 1 0 1 0 0 0 0
1444	1 1 1 0 1 1 1 0 1 1 0 0 1 1 0 0 1 0 0 0 0 1 0
1445	1 1 1 0 1 1 1 0 1 1 1 1 0 1 1 1 0 0 0 0 1 1 0
1446	1 1 1 0 1 1 1 0 1 0 1 0 0 0 0 0 0 0 0 1 1 1 1
1447	1 1 1 0 1 1 1 0 1 0 0 1 1 0 1 1 1 0 0 1 0 1 1
1448	1 1 1 0 1 1 1 1 1 0 0 0 0 1 1 1 1 0 1 1 1 0
1449	1 1 1 0 1 1 1 1 1 0 1 1 1 0 0 0 1 0 1 0 1 0

FIG.17DD

TID	CODEWORD (23,11)
1450	1 1 1 0 1 1 1 1 1 1 1 0 1 0 1 1 0 1 0 0 0 1 1
1451	1 1 1 0 1 1 1 1 1 1 0 1 0 0 0 0 1 1 0 0 1 1 1
1452	1 1 1 0 1 1 1 1 0 1 0 0 1 1 1 0 1 1 1 0 1 0 1
1453	1 1 1 0 1 1 1 1 0 1 1 1 0 1 0 1 0 1 1 0 0 0 1
1454	1 1 1 0 1 1 1 1 0 0 1 0 0 0 1 0 0 1 1 1 0 0 0
1455	1 1 1 0 1 1 1 1 0 0 0 1 1 0 0 1 1 1 1 1 1 0 0
1456	1 1 1 0 1 1 0 1 0 0 0 0 0 0 0 1 0 1 1 0 1 1 1
1457	1 1 1 0 1 1 0 1 0 0 1 1 1 0 1 0 1 1 1 0 0 1 1
1458	1 1 1 0 1 1 0 1 0 1 1 0 1 1 0 1 1 1 1 1 0 1 0
1459	1 1 1 0 1 1 0 1 0 1 0 1 0 1 1 0 0 1 1 1 1 1 0
1460	1 1 1 0 1 1 0 1 1 1 0 1 0 0 0 0 0 1 0 1 1 0 0
1461	1 1 1 0 1 1 0 1 1 1 1 1 0 0 1 1 1 1 0 1 0 0 0
1462	1 1 1 0 1 1 0 1 1 0 1 0 0 1 0 0 1 1 0 0 0 0 1
1463	1 1 1 0 1 1 0 1 1 0 0 1 1 1 1 0 1 0 0 1 0 1
1464	1 1 1 0 1 1 0 0 1 0 0 0 0 1 1 0 0 0 0 0 0 0
1465	1 1 1 0 1 1 0 0 1 0 1 1 1 0 0 0 1 0 0 0 1 0 0
1466	1 1 1 0 1 1 0 0 1 1 1 0 1 1 1 1 1 0 0 1 1 0 1
1467	1 1 1 0 1 1 0 0 1 1 0 1 0 1 0 0 0 0 0 1 0 0 1
1468	1 1 1 0 1 1 0 0 0 1 0 0 1 0 1 0 0 0 1 1 0 1 1
1469	1 1 1 0 1 1 0 0 0 1 1 1 0 0 0 1 1 0 1 1 1 1 1
1470	1 1 1 0 1 1 0 0 0 0 1 0 0 1 1 0 1 0 1 0 1 1 0
1471	1 1 1 0 1 1 0 0 0 0 0 1 1 1 0 1 0 0 1 0 0 1 0
1472	1 1 1 0 0 1 0 0 0 0 0 0 1 1 1 1 0 1 1 1 1 0 0
1473	1 1 1 0 0 1 0 0 0 0 1 1 0 1 0 0 1 1 1 1 0 0 0
1474	1 1 1 0 0 1 0 0 0 1 1 0 0 0 1 1 1 1 1 0 0 0 1
1475	1 1 1 0 0 1 0 0 0 1 0 1 1 0 0 0 0 1 1 0 1 0 1
1476	1 1 1 0 0 1 0 0 1 1 0 0 0 1 1 0 0 1 0 0 1 1 1
1477	1 1 1 0 0 1 0 0 1 1 1 1 1 1 0 1 1 1 0 0 0 1 1
1478	1 1 1 0 0 1 0 0 1 0 1 0 1 0 1 0 1 1 0 1 0 1 0
1479	1 1 1 0 0 1 0 0 1 0 0 1 0 0 0 1 0 0 1 0 1 1 1 0
1480	1 1 1 0 0 1 0 1 1 0 0 0 1 1 0 1 0 0 0 1 0 1 1
1481	1 1 1 0 0 1 0 1 1 0 1 1 0 1 1 0 1 0 0 1 1 1 1
1482	1 1 1 0 0 1 0 1 1 1 1 0 0 0 0 1 1 0 0 0 1 1 0
1483	1 1 1 0 0 1 0 1 1 1 0 1 1 0 1 0 0 0 0 0 0 1 0
1484	1 1 1 0 0 1 0 1 0 1 0 0 0 1 0 0 0 0 1 0 0 0 0
1485	1 1 1 0 0 1 0 1 0 1 1 1 1 1 1 1 0 1 0 1 0 0
1486	1 1 1 0 0 1 0 1 0 0 1 0 1 0 0 0 1 0 1 1 1 0 1
1487	1 1 1 0 0 1 0 1 0 0 0 1 0 0 1 1 0 0 1 1 0 0 1
1488	1 1 1 0 0 1 1 1 0 0 0 0 1 0 1 1 1 0 1 0 0 1 0
1489	1 1 1 0 0 1 1 1 0 1 1 0 0 1 1 1 0 0 1 1 1 1 1
1490	1 1 1 0 0 1 1 1 0 1 1 0 0 1 1 1 0 0 1 1 1 1 1
1491	1 1 1 0 0 1 1 1 0 1 0 1 1 1 0 0 1 0 1 1 0 1 1
1492	1 1 1 0 0 1 1 1 1 0 0 0 0 1 0 1 0 0 1 0 0 1
1493	1 1 1 0 0 1 1 1 1 1 1 1 0 0 1 0 0 0 1 1 0 1
1494	1 1 1 0 0 1 1 1 0 1 0 1 1 1 0 0 0 0 0 1 0 0
1495	1 1 1 0 0 1 1 1 0 0 1 0 1 0 1 1 0 0 0 0 0 0
1496	1 1 1 0 0 1 1 0 1 0 0 0 1 0 0 1 1 1 0 0 1 0 1
1497	1 1 1 0 0 1 1 0 1 0 1 1 0 0 1 0 0 1 0 0 0 0 1
1498	1 1 1 0 0 1 1 0 1 1 1 0 0 1 0 1 0 1 0 1 0 0 0
1499	1 1 1 0 0 1 1 0 1 1 0 1 1 1 1 0 1 1 0 1 1 0 0

FIG.17EE

TITLE: TRACK IDENTIFICATION CODEWORDS HAVING MULTIPLE BIT ERROR
CORRECTION CAPABILITY AND GENERALIZED GRAY CODE PROPERTY
INVENTOR: JAI N. SUBRAHMANYAM
ATTY DOCKET NUMBER: K35A1290

24/30

TID	CODEWORD (23,11)
1500	1 1 1 0 0 1 1 0 0 1 0 0 0 0 0 0 1 1 1 1 1 1 0
1501	1 1 1 0 0 1 1 0 0 1 1 1 1 0 1 1 0 1 1 1 0 1 0
1502	1 1 1 0 0 1 1 0 0 0 1 0 1 1 0 0 0 1 1 0 0 1 1
1503	1 1 1 0 0 1 1 0 0 0 0 1 0 1 1 1 1 1 1 0 1 1 1
1504	1 1 1 0 0 0 1 0 0 0 0 0 0 1 1 0 1 1 0 0 0 0 0
1505	1 1 1 0 0 0 1 0 0 0 1 1 1 1 0 1 0 1 0 0 1 0 0
1506	1 1 1 0 0 0 1 0 0 1 1 0 1 0 1 0 0 1 0 1 1 0 1
1507	1 1 1 0 0 0 1 0 0 1 0 1 0 0 0 1 1 1 0 1 0 0 1
1508	1 1 1 0 0 0 1 0 1 1 0 0 1 1 1 1 1 1 1 1 0 1 1
1509	1 1 1 0 0 0 1 0 1 1 1 1 0 1 0 0 0 1 1 1 1 1 1
1510	1 1 1 0 0 0 1 0 1 0 1 0 0 0 1 1 0 1 1 0 1 1 0
1511	1 1 1 0 0 0 1 0 1 0 0 1 1 0 0 0 1 1 1 0 0 1 0
1512	1 1 1 0 0 0 1 1 1 0 0 0 0 1 0 0 1 0 1 0 1 1 1
1513	1 1 1 0 0 0 1 1 1 0 1 1 1 1 1 1 0 0 1 0 0 1 1
1514	1 1 1 0 0 0 1 1 1 1 1 0 1 0 0 0 0 0 1 1 0 1 0
1515	1 1 1 0 0 0 1 1 1 1 0 1 0 0 1 1 1 0 1 1 1 1 0
1516	1 1 1 0 0 0 1 1 0 1 0 0 1 1 0 1 1 0 0 1 1 0 0
1517	1 1 1 0 0 0 1 1 0 1 1 1 0 1 1 0 0 0 0 1 0 0 0
1518	1 1 1 0 0 0 1 1 0 0 1 0 0 0 0 1 0 0 0 0 0 0 1
1519	1 1 1 0 0 0 1 1 0 0 0 1 1 0 1 0 1 0 0 0 1 0 1
1520	1 1 1 0 0 0 0 1 0 0 0 0 0 0 1 0 0 0 0 1 1 1 0
1521	1 1 1 0 0 0 0 1 0 0 1 1 1 0 0 1 1 0 0 1 0 1 0
1522	1 1 1 0 0 0 0 1 0 1 1 0 1 1 1 0 1 0 0 0 0 1 1
1523	1 1 1 0 0 0 0 1 0 1 0 1 0 1 0 1 0 0 0 0 1 1 1
1524	1 1 1 0 0 0 0 1 1 1 0 0 1 0 1 1 0 0 1 0 1 0 1
1525	1 1 1 0 0 0 0 1 1 1 1 0 0 0 0 1 0 1 0 0 0 0 1
1526	1 1 1 0 0 0 0 1 1 0 1 0 0 1 1 1 1 0 1 1 0 0 0
1527	1 1 1 0 0 0 0 1 1 0 0 1 1 1 0 0 0 0 1 1 1 0 0
1528	1 1 1 0 0 0 0 0 1 0 1 1 1 0 1 1 1 1 1 1 1 0 1
1529	1 1 1 0 0 0 0 0 1 0 1 1 1 0 1 1 1 1 1 1 1 0 1
1530	1 1 1 0 0 0 0 0 1 1 1 0 1 1 0 0 1 1 1 0 1 0 0
1531	1 1 1 0 0 0 0 0 1 1 0 1 0 1 1 1 0 1 1 0 0 0 0
1532	1 1 1 0 0 0 0 0 0 1 0 0 1 0 0 1 0 1 0 0 0 1 0
1533	1 1 1 0 0 0 0 0 0 1 1 1 0 0 1 0 1 1 0 0 1 1 0
1534	1 1 1 0 0 0 0 0 0 0 1 0 0 1 0 1 1 1 0 1 1 1 1
1535	1 1 1 0 0 0 0 0 0 0 0 1 1 1 1 0 0 1 0 1 0 1 1
1536	1 0 1 0 0 0 0 0 0 0 0 1 1 0 0 1 0 1 1 0 1 0
1537	1 0 1 0 0 0 0 0 0 1 1 0 1 1 1 0 0 1 1 1 1 0
1538	1 0 1 0 0 0 0 0 1 1 0 0 0 0 0 0 1 0 1 1 1
1539	1 0 1 0 0 0 0 0 1 0 1 1 0 1 1 1 0 1 0 0 1 1
1540	1 0 1 0 0 0 0 0 1 1 0 0 0 1 0 1 1 0 0 0 0 0 1
1541	1 0 1 0 0 0 0 0 1 1 1 1 1 1 0 0 0 0 0 1 0 1
1542	1 0 1 0 0 0 0 0 1 0 1 0 1 0 0 1 0 0 0 1 1 0 0
1543	1 0 1 0 0 0 0 0 1 0 0 1 0 0 1 0 1 0 0 1 0 0 0
1544	1 0 1 0 0 0 0 1 1 0 0 0 1 1 1 0 1 1 0 1 1 0 1
1545	1 0 1 0 0 0 0 1 1 0 1 1 0 1 0 1 0 1 0 1 0 0 1
1546	1 0 1 0 0 0 0 1 1 1 1 0 0 0 1 0 0 1 0 0 0 0 0
1547	1 0 1 0 0 0 0 1 1 1 0 1 1 0 0 1 1 1 0 0 1 0 0
1548	1 0 1 0 0 0 0 1 0 1 0 0 0 1 1 1 1 1 0 1 1 0
1549	1 0 1 0 0 0 0 1 0 1 1 1 1 0 0 0 1 1 0 0 1 0

FIG.17FF

TID	CODEWORD (23,11)
1550	1 0 1 0 0 0 0 1 0 0 1 0 1 0 1 1 0 1 1 1 0 1 1
1551	1 0 1 0 0 0 0 1 0 0 0 1 0 0 0 0 1 1 1 1 1 1 1
1552	1 0 1 0 0 0 1 1 0 0 0 0 1 0 0 0 0 1 1 0 1 0 0
1553	1 0 1 0 0 0 1 1 0 0 1 1 0 0 1 1 1 1 1 0 0 0 0
1554	1 0 1 0 0 0 1 1 0 1 1 0 0 1 0 0 1 1 1 1 0 0 1
1555	1 0 1 0 0 0 1 1 0 1 0 1 1 1 1 0 1 1 1 1 0 1 1
1556	1 0 1 0 0 0 1 1 1 1 0 0 0 0 0 1 0 1 0 1 1 1 1
1557	1 0 1 0 0 0 1 1 1 1 1 1 0 1 0 1 1 0 1 0 1 1
1558	1 0 1 0 0 0 1 1 1 0 1 0 1 1 0 1 1 1 0 0 0 1 0
1559	1 0 1 0 0 0 1 1 1 0 0 1 0 1 1 0 0 1 0 0 1 1 0
1560	1 0 1 0 0 0 1 0 1 0 1 0 0 0 1 0 1 0 0 0 0 1 1
1561	1 0 1 0 0 0 1 0 1 0 1 1 0 0 0 1 1 0 0 0 1 1 1
1562	1 0 1 0 0 0 1 0 1 1 1 0 0 1 1 0 1 0 0 1 1 1 0
1563	1 0 1 0 0 0 1 0 1 0 1 1 1 0 1 0 0 0 1 0 1 0
1564	1 0 1 0 0 0 1 0 0 1 0 0 0 0 1 1 0 0 1 1 0 0 0
1565	1 0 1 0 0 0 1 0 0 1 1 1 1 0 0 0 1 0 1 1 1 0 0
1566	1 0 1 0 0 0 1 0 0 0 1 0 1 1 1 1 0 1 0 1 0 1
1567	1 0 1 0 0 0 1 0 0 0 0 0 1 0 1 0 0 0 0 1 0 0 0 1
1568	1 0 1 0 0 1 1 0 0 0 0 0 0 1 0 1 0 0 0 0 1 1 0
1569	1 0 1 0 0 1 1 0 0 0 1 1 1 1 0 1 0 0 0 0 0 1 0
1570	1 0 1 0 0 1 1 0 0 1 1 0 1 0 0 1 1 0 0 1 0 1 1
1571	1 0 1 0 0 1 1 0 0 1 0 1 0 0 1 0 0 0 0 1 1 1 1
1572	1 0 1 0 0 1 1 0 1 1 0 0 1 1 0 0 0 0 1 1 1 0 1
1573	1 0 1 0 0 1 1 0 1 1 1 1 0 1 1 1 1 0 1 1 0 0 1
1574	1 0 1 0 0 1 1 0 1 0 1 0 0 0 0 1 0 1 0 0 0 0
1575	1 0 1 0 0 1 1 0 1 0 0 1 1 0 1 1 0 0 1 0 1 0 0
1576	1 0 1 0 0 1 1 1 1 0 0 0 0 1 1 1 0 1 1 0 0 0 1
1577	1 0 1 0 0 1 1 1 1 0 1 1 1 1 0 0 1 1 1 0 1 0 1
1578	1 0 1 0 0 1 1 1 1 1 1 0 1 0 1 1 1 1 1 1 1 0 0
1579	1 0 1 0 0 1 1 1 1 1 0 1 0 0 0 0 0 0 1 1 0 1 0
1580	1 0 1 0 0 1 1 1 0 1 0 0 1 1 1 0 0 1 0 1 0 1 0
1581	1 0 1 0 0 1 1 1 0 1 1 1 0 1 0 1 1 1 0 1 1 1 0
1582	1 0 1 0 0 1 1 1 0 0 1 0 0 0 1 0 1 1 0 0 1 1 1
1583	1 0 1 0 0 1 1 1 0 0 0 1 1 0 0 1 0 1 0 0 0 1 1
1584	1 0 1 0 0 1 0 1 0 0 0 0 0 0 0 1 1 1 0 1 0 0 0
1585	1 0 1 0 0 1 0 1 0 0 1 1 1 0 1 0 0 1 0 1 1 0 0
1586	1 0 1 0 0 1 0 1 0 1 1 0 1 1 0 1 0 1 0 0 1 0 1
1587	1 0 1 0 0 1 0 1 0 1 0 1 0 1 1 0 1 1 0 0 0 0 1
1588	1 0 1 0 0 1 0 1 1 1 0 0 1 0 0 0 1 1 1 0 0 1 1
1589	1 0 1 0 0 1 0 1 1 1 1 0 0 1 1 0 1 1 0 1 0 1 1
1590	1 0 1 0 0 1 0 1 1 0 1 0 0 1 0 0 0 1 1 1 1 1 0
1591	1 0 1 0 0 1 0 1 1 0 0 1 1 1 1 1 1 1 1 0 1 0
1592	1 0 1 0 0 1 0 0 1 0 0 0 0 0 1 1 1 0 1 1 1 1 1
1593	1 0 1 0 0 1 0 0 1 0 1 1 1 0 0 0 0 0 1 1 0 1 1
1594	1 0 1 0 0 1 0 0 1 1 1 0 1 1 1 1 0 0 1 0 0 1 0
1595	1 0 1 0 0 1 0 0 1 1 0 1 0 1 0 0 1 0 1 0 1 1 0
1596	1 0 1 0 0 1 0 0 0 1 0 0 1 0 1 0 1 0 0 0 1 0 0
1597	1 0 1 0 0 1 0 0 0 1 1 1 0 0 0 1 0 0 0 0 0 0 0
1598	1 0 1 0 0 1 0 0 0 0 1 0 0 1 1 0 0 0 0 1 0 0 1
1599	1 0 1 0 0 1 0 0 0 0 0 1 1 1 0 1 1 0 0 1 1 0 1

FIG.17GG

TITLE: TRACK IDENTIFICATION CODEWORDS HAVING MULTIPLE BIT ERROR
CORRECTION CAPABILITY AND GENERALIZED GRAY CODE PROPERTY
INVENTOR: JAI N. SUBRAHMANYAM
ATTY DOCKET NUMBER: K35A1290

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TID	CODEWORD (23,11)
1600	1 0 1 0 1 1 0 0 0 0 0 0 1 1 1 1 1 1 0 0 0 1 1
1601	1 0 1 0 1 1 0 0 0 1 1 0 1 0 0 0 1 0 0 1 1 1
1602	1 0 1 0 1 1 0 0 0 1 1 0 0 0 1 1 0 1 0 1 1 1 0
1603	1 0 1 0 1 1 0 0 0 1 0 1 1 0 0 0 1 1 0 1 0 1 0
1604	1 0 1 0 1 1 0 0 1 1 0 0 0 1 1 0 1 1 1 1 0 0 0
1605	1 0 1 0 1 1 0 0 1 1 1 1 1 0 1 0 1 1 1 1 0 0
1606	1 0 1 0 1 1 0 0 1 0 1 0 1 0 1 0 0 1 1 0 1 0 1
1607	1 0 1 0 1 1 0 0 1 0 0 1 0 0 0 1 1 1 1 0 0 0 1
1608	1 0 1 0 1 1 0 1 1 0 0 0 1 1 0 1 1 0 1 0 1 0 0
1609	1 0 1 0 1 1 0 1 1 0 1 1 0 1 1 0 0 0 1 0 0 0 0
1610	1 0 1 0 1 1 0 1 1 1 1 0 0 0 0 1 0 0 1 1 0 0 1
1611	1 0 1 0 1 1 0 1 1 1 0 1 1 0 1 0 1 0 1 1 1 0 1
1612	1 0 1 0 1 1 0 1 0 1 0 0 0 1 0 0 1 0 0 1 1 1 1
1613	1 0 1 0 1 1 0 1 0 1 1 1 1 1 1 0 0 0 1 0 1 1
1614	1 0 1 0 1 1 0 1 0 0 1 0 1 0 0 0 0 0 0 0 1 0
1615	1 0 1 0 1 1 0 1 0 0 0 1 0 0 1 1 1 0 0 0 1 1 0
1616	1 0 1 0 1 1 1 1 0 0 0 0 1 0 1 1 0 0 0 1 1 0 1
1617	1 0 1 0 1 1 1 1 0 0 1 1 0 0 0 0 1 0 0 1 0 0 1
1618	1 0 1 0 1 1 1 1 0 1 1 0 0 1 1 1 1 0 0 0 0 0 0
1619	1 0 1 0 1 1 1 1 0 1 0 1 1 1 0 0 0 0 0 1 0 0
1620	1 0 1 0 1 1 1 1 1 0 0 0 0 1 0 0 0 1 0 1 1 0
1621	1 0 1 0 1 1 1 1 1 1 1 1 0 0 1 1 0 1 0 0 1 0
1622	1 0 1 0 1 1 1 1 0 1 0 1 1 1 0 1 0 1 1 0 1 1
1623	1 0 1 0 1 1 1 1 0 0 1 0 1 0 1 0 0 1 1 1 1 1
1624	1 0 1 0 1 1 1 0 1 0 0 0 1 0 0 1 0 1 1 1 0 1 0
1625	1 0 1 0 1 1 1 0 1 0 1 1 0 0 1 0 1 1 1 1 1 0
1626	1 0 1 0 1 1 1 0 1 1 1 0 0 1 0 1 1 1 1 0 1 1 1
1627	1 0 1 0 1 1 1 0 1 1 0 1 1 1 1 0 0 1 1 0 0 1 1
1628	1 0 1 0 1 1 1 0 0 1 0 0 0 0 0 0 0 1 0 0 0 0 1
1629	1 0 1 0 1 1 1 0 0 1 1 1 1 0 1 1 1 1 0 0 1 0 1
1630	1 0 1 0 1 1 1 0 0 0 1 0 1 1 0 0 1 1 0 1 1 0 0
1631	1 0 1 0 1 1 1 0 0 0 0 1 0 1 1 1 0 1 0 1 0 0 0
1632	1 0 1 0 1 0 1 0 0 0 0 0 0 1 1 0 0 1 1 1 1 1 1
1633	1 0 1 0 1 0 1 0 0 0 1 1 1 1 0 1 1 1 1 0 1 1
1634	1 0 1 0 1 0 1 0 0 1 1 0 1 0 1 0 1 1 1 0 0 1 0
1635	1 0 1 0 1 0 1 0 0 1 0 1 0 0 0 1 0 1 1 0 1 1 0
1636	1 0 1 0 1 0 1 0 1 1 0 0 1 1 1 1 0 1 0 0 1 0 0
1637	1 0 1 0 1 0 1 0 1 1 1 1 0 1 0 0 1 0 1 0 0 0 0
1638	1 0 1 0 1 0 1 0 1 0 1 0 0 0 1 1 1 1 0 1 0 0 1
1639	1 0 1 0 1 0 1 0 1 0 0 1 1 0 0 0 0 1 0 1 1 0 1
1640	1 0 1 0 1 0 1 1 1 0 0 0 0 1 0 0 0 0 0 1 0 0 0
1641	1 0 1 0 1 0 1 1 1 0 1 1 1 1 1 1 0 0 1 1 0 0
1642	1 0 1 0 1 0 1 1 1 1 0 1 0 0 0 1 0 0 0 1 0 1
1643	1 0 1 0 1 0 1 1 1 1 0 1 0 0 1 1 0 0 0 0 0 1
1644	1 0 1 0 1 0 1 1 0 1 0 0 1 1 0 1 0 0 1 0 0 1 1
1645	1 0 1 0 1 0 1 1 0 1 1 1 0 1 1 0 1 0 1 0 1 1 1
1646	1 0 1 0 1 0 1 1 0 0 1 0 0 0 0 0 1 1 0 1 1 1 0
1647	1 0 1 0 1 0 1 1 0 0 0 1 1 0 1 1 0 0 1 1 0 1 0
1648	1 0 1 0 1 0 0 1 0 0 0 0 0 0 1 0 1 0 1 0 0 0 1
1649	1 0 1 0 1 0 0 1 0 0 1 1 1 0 0 1 0 0 1 0 1 0 1

FIG.17HH

TID	CODEWORD (23,11)
1650	1 0 1 0 1 0 0 1 0 1 1 0 1 1 1 0 0 0 1 1 1 0 0
1651	1 0 1 0 1 0 0 1 0 1 0 1 0 1 0 1 1 0 1 1 0 0 0
1652	1 0 1 0 1 0 0 1 1 1 0 0 1 0 1 1 1 0 0 1 0 1 0
1653	1 0 1 0 1 0 0 1 1 1 1 0 0 0 0 0 0 0 1 1 1 0
1654	1 0 1 0 1 0 0 1 1 0 1 0 0 1 1 1 0 0 0 0 1 1 1
1655	1 0 1 0 1 0 0 1 1 0 0 1 1 1 0 0 1 0 0 0 0 1 1
1656	1 0 1 0 1 0 0 0 1 0 0 0 0 0 0 1 1 0 0 1 1 0
1657	1 0 1 0 1 0 0 0 1 0 1 1 1 0 1 1 0 1 0 0 0 1 0
1658	1 0 1 0 1 0 0 0 1 1 1 0 1 1 0 0 0 1 0 1 0 1 1
1659	1 0 1 0 1 0 0 0 1 1 0 1 0 1 1 1 1 0 1 1 1 1
1660	1 0 1 0 1 0 0 0 0 1 0 0 1 0 0 1 1 1 1 1 1 0 1
1661	1 0 1 0 1 0 0 0 0 1 1 1 0 0 1 0 0 1 1 1 0 0 1
1662	1 0 1 0 1 0 0 0 0 0 1 0 0 1 0 1 0 1 1 0 0 0 0
1663	1 0 1 0 1 0 0 0 0 0 0 1 1 1 1 0 1 1 1 0 1 0 0
1664	1 0 1 1 1 0 0 0 0 0 0 1 0 1 0 0 1 0 1 0 0 0 0
1665	1 0 1 1 1 0 0 0 0 1 1 0 0 0 1 1 1 0 1 1 0 0
1666	1 0 1 1 1 0 0 0 0 1 1 0 0 1 1 0 1 1 0 0 1 0 1
1667	1 0 1 1 1 0 0 0 0 1 0 1 1 1 0 1 0 1 0 0 0 0 1
1668	1 0 1 1 1 0 0 0 1 1 0 0 0 0 1 1 0 1 1 0 0 1 1
1669	1 0 1 1 1 0 0 0 1 1 1 1 1 0 0 0 1 1 1 0 1 1 1
1670	1 0 1 1 1 0 0 0 1 0 1 0 1 1 1 1 1 1 1 1 1 0
1671	1 0 1 1 1 0 0 0 1 0 0 1 0 1 0 0 0 1 1 1 0 1 0
1672	1 0 1 1 1 0 0 1 1 0 0 0 1 0 0 0 0 1 1 1 1 1
1673	1 0 1 1 1 0 0 1 1 0 1 1 0 0 1 1 1 0 1 1 0 1 1
1674	1 0 1 1 1 0 0 1 1 1 1 0 0 1 0 0 1 0 1 0 0 1 0
1675	1 0 1 1 1 0 0 1 1 1 0 1 1 1 1 1 0 0 1 0 1 1 0
1676	1 0 1 1 1 0 0 1 0 1 0 0 0 0 0 1 0 0 0 0 1 0 0
1677	1 0 1 1 1 0 0 1 0 1 1 1 1 0 1 0 1 0 0 0 0 0 0
1678	1 0 1 1 1 0 0 1 0 0 1 0 1 1 0 1 1 0 0 1 0 0 1
1679	1 0 1 1 1 0 0 1 0 0 0 1 0 1 1 0 0 0 0 1 1 0 1
1680	1 0 1 1 1 0 1 1 0 0 0 0 1 1 1 0 1 0 0 0 1 1 0
1681	1 0 1 1 1 0 1 1 0 0 1 1 0 1 0 1 0 0 0 0 0 1 0
1682	1 0 1 1 1 0 1 1 0 1 1 0 0 0 1 0 0 0 0 1 0 1 1
1683	1 0 1 1 1 0 1 1 0 1 0 1 1 0 0 1 1 0 0 1 1 1 1
1684	1 0 1 1 1 0 1 1 1 1 0 0 0 1 1 1 1 0 1 1 1 0 1
1685	1 0 1 1 1 0 1 1 1 1 1 1 1 0 0 0 0 1 1 0 0 1
1686	1 0 1 1 1 0 1 1 1 0 1 0 1 1 0 0 1 0 0 0 0
1687	1 0 1 1 1 0 1 1 1 0 0 1 0 0 0 0 1 0 1 0 1 0 0
1688	1 0 1 1 1 0 1 0 1 0 0 0 1 1 0 0 1 1 1 0 0 0 1
1689	1 0 1 1 1 0 1 0 1 0 1 1 0 1 1 1 0 1 1 0 1 0 1
1690	1 0 1 1 1 0 1 0 1 1 1 0 0 0 0 0 0 1 1 1 1 0 0
1691	1 0 1 1 1 0 1 0 1 1 0 1 1 0 1 1 1 1 1 1 0 0 0
1692	1 0 1 1 1 0 1 0 0 1 0 0 0 1 0 1 1 1 0 1 0 1 0
1693	1 0 1 1 1 0 1 0 0 1 1 1 1 1 0 0 1 0 1 1 1 0
1694	1 0 1 1 1 0 1 0 0 0 1 0 1 0 0 1 0 1 0 0 1 1 1
1695	1 0 1 1 1 0 1 0 0 0 0 1 0 0 1 0 1 1 0 0 0 1 1
1696	1 0 1 1 1 1 1 0 0 0 0 0 0 0 1 1 1 1 0 1 0 0
1697	1 0 1 1 1 1 1 0 0 0 1 1 1 0 0 0 0 1 1 0 0 0 0
1698	1 0 1 1 1 1 1 0 0 1 1 0 1 1 1 1 0 1 1 1 0 0 1
1699	1 0 1 1 1 1 1 0 0 1 0 1 0 1 0 0 1 1 1 1 1 0 1

FIG.17II

TITLE: TRACK IDENTIFICATION CODEWORDS HAVING MULTIPLE BIT ERROR
CORRECTION CAPABILITY AND GENERALIZED GRAY CODE PROPERTY
INVENTOR: JAI N. SUBRAHMANYAM
ATTY DOCKET NUMBER: K35A1290

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TID	CODEWORD (23,11)
1700	1 0 1 1 1 1 1 0 1 1 0 0 1 0 1 0 1 1 0 1 1 1 1
1701	1 0 1 1 1 1 1 0 1 1 1 1 0 0 0 1 0 1 0 1 0 1 1
1702	1 0 1 1 1 1 1 0 1 0 1 0 0 1 1 0 0 1 0 0 0 1 0
1703	1 0 1 1 1 1 1 0 1 0 0 1 1 1 0 1 1 1 0 0 1 1 0
1704	1 0 1 1 1 1 1 1 1 0 0 0 0 0 0 1 1 0 0 0 0 1 1
1705	1 0 1 1 1 1 1 1 1 0 1 1 1 0 1 0 0 0 0 0 1 1 1
1706	1 0 1 1 1 1 1 1 1 1 1 0 1 1 0 1 0 0 0 1 1 1 0
1707	1 0 1 1 1 1 1 1 1 0 1 0 1 1 0 1 0 0 1 0 1 0 1
1708	1 0 1 1 1 1 1 1 0 1 0 0 1 0 0 0 1 0 1 1 0 0 0
1709	1 0 1 1 1 1 1 0 1 1 1 0 0 1 1 0 0 1 1 0 1 0 0
1710	1 0 1 1 1 1 1 1 0 0 1 0 0 1 0 0 0 0 1 0 1 0 1
1711	1 0 1 1 1 1 1 1 0 0 0 1 1 1 1 1 1 0 1 0 0 0 1
1712	1 0 1 1 1 1 0 1 0 0 0 0 0 1 1 1 0 0 1 1 0 1 0
1713	1 0 1 1 1 1 0 1 0 0 1 1 1 1 0 0 1 0 1 1 1 1 0
1714	1 0 1 1 1 1 0 1 0 1 1 0 1 0 1 1 1 0 1 0 1 1 1
1715	1 0 1 1 1 1 0 1 0 1 0 1 0 0 0 0 0 1 0 0 0 1 1
1716	1 0 1 1 1 1 0 1 1 1 1 0 0 1 1 1 0 0 0 0 0 0 1
1717	1 0 1 1 1 1 0 1 1 1 1 1 0 1 0 1 1 0 0 0 1 0 1
1718	1 0 1 1 1 1 0 1 1 0 1 0 0 0 0 1 0 1 0 0 1 1 0
1719	1 0 1 1 1 1 0 1 1 0 0 1 1 0 0 1 0 0 0 1 0 0 0
1720	1 0 1 1 1 1 0 0 1 0 0 0 0 1 0 1 0 1 0 1 1 0 1
1721	1 0 1 1 1 1 0 0 1 0 1 1 1 1 1 0 1 1 0 1 0 0 1
1722	1 0 1 1 1 1 0 0 1 1 1 0 1 0 0 1 1 1 0 0 0 0 0
1723	1 0 1 1 1 1 0 0 1 1 0 1 0 0 1 0 0 1 0 0 1 0 0
1724	1 0 1 1 1 0 0 0 1 0 0 1 1 0 0 0 1 1 0 1 1 0
1725	1 0 1 1 1 1 0 0 0 1 1 1 0 1 1 1 1 1 1 0 0 1 0
1726	1 0 1 1 1 1 0 0 0 0 1 0 0 0 0 0 1 1 1 1 0 1 1
1727	1 0 1 1 1 1 0 0 0 0 0 1 1 0 1 1 0 1 1 1 1 1 1
1728	1 0 1 1 0 1 0 0 0 0 0 0 1 0 0 1 0 0 1 0 0 0 1
1729	1 0 1 1 0 1 0 0 0 0 1 1 0 0 1 0 1 0 1 0 1 0 1
1730	1 0 1 1 0 1 0 0 0 1 1 0 0 1 0 1 1 0 1 1 1 0 0
1731	1 0 1 1 0 1 0 0 0 1 0 1 1 1 1 0 0 0 1 1 0 0 0
1732	1 0 1 1 0 1 0 0 1 1 0 0 0 0 0 0 0 0 1 0 1 0
1733	1 0 1 1 0 1 0 0 1 1 1 1 0 1 1 1 0 0 1 1 1 0
1734	1 0 1 1 0 1 0 0 1 0 1 0 1 1 0 0 1 0 0 0 1 1 1
1735	1 0 1 1 0 1 0 0 1 0 0 1 0 1 1 1 0 0 0 0 0 1 1
1736	1 0 1 1 0 1 0 1 1 0 0 0 1 0 1 1 0 1 0 0 1 1 0
1737	1 0 1 1 0 1 0 1 1 0 1 1 0 0 0 1 1 0 0 0 0 1 0
1738	1 0 1 1 0 1 0 1 1 1 0 0 1 1 1 1 1 0 1 0 0 1 1
1739	1 0 1 1 0 1 0 1 1 1 0 1 1 1 0 0 0 1 0 1 1 1 1
1740	1 0 1 1 0 1 0 1 0 1 0 0 0 0 1 0 0 1 1 1 1 0 1
1741	1 0 1 1 0 1 0 1 0 1 1 1 1 0 0 1 1 1 1 1 0 0 1
1742	1 0 1 1 0 1 0 1 0 0 1 0 1 1 1 0 1 1 1 0 0 0 0
1743	1 0 1 1 0 1 0 1 0 0 0 1 0 1 0 1 0 1 1 0 1 0 0
1744	1 0 1 1 0 1 1 1 0 0 0 0 1 1 0 1 1 1 1 1 1 1 1
1745	1 0 1 1 0 1 1 1 0 0 1 1 0 1 1 0 0 1 1 1 0 1 1
1746	1 0 1 1 0 1 1 1 0 1 1 0 0 0 0 1 0 1 1 0 0 1 0
1747	1 0 1 1 0 1 1 1 1 0 0 0 1 1 0 1 0 1 1 0 1 1 0
1748	1 0 1 1 0 1 1 1 1 0 0 0 1 0 0 1 1 0 0 1 0 0
1749	1 0 1 1 0 1 1 1 1 1 1 1 1 1 1 0 1 0 0 0 0 0

FIG.17JJ

TID	CODEWORD (23,11)
1750	1 0 1 1 0 1 1 1 1 0 1 0 1 0 0 0 0 1 0 1 0 0 1
1751	1 0 1 1 0 1 1 1 1 0 0 1 0 0 1 1 1 1 0 1 1 0 1
1752	1 0 1 1 0 1 1 0 1 0 0 0 1 1 1 1 1 0 0 1 0 0 0
1753	1 0 1 1 0 1 1 0 1 0 1 1 0 1 0 0 0 0 0 1 1 0 0
1754	1 0 1 1 0 1 1 0 1 1 1 0 0 0 1 1 0 0 0 0 1 0 1
1755	1 0 1 1 0 1 1 0 1 1 0 1 1 0 0 0 1 0 0 0 0 0 1
1756	1 0 1 1 0 1 1 0 0 1 0 0 0 1 1 0 1 0 1 0 0 1 1
1757	1 0 1 1 0 1 1 0 0 1 1 1 1 0 1 0 0 1 0 1 1 1
1758	1 0 1 1 0 1 1 0 0 0 1 0 1 0 1 0 0 0 1 1 1 0
1759	1 0 1 1 0 1 1 0 0 0 0 0 0 1 1 0 1 1 0 1 0
1760	1 0 1 1 0 0 1 0 0 0 0 0 0 0 1 0 0 1 1 0 1
1761	1 0 1 1 0 0 1 0 0 0 1 1 1 0 1 1 0 0 0 1 0 0 1
1762	1 0 1 1 0 0 1 0 0 1 1 0 1 1 0 0 0 0 0 0 0 0 0
1763	1 0 1 1 0 0 1 0 0 1 0 1 0 1 1 1 1 0 0 0 1 0 0
1764	1 0 1 1 0 0 1 0 1 1 0 0 1 0 0 1 1 0 1 0 1 1 0
1765	1 0 1 1 0 0 1 0 1 1 1 1 0 0 1 0 0 0 1 0 0 1 0
1766	1 0 1 1 0 0 1 0 1 0 1 0 0 1 0 1 0 0 1 1 0 1 1
1767	1 0 1 1 0 0 1 0 1 0 0 1 1 1 1 0 1 0 1 1 1 1 1
1768	1 0 1 1 0 0 1 1 1 0 0 0 0 0 1 0 1 1 1 1 0 1 0
1769	1 0 1 1 0 0 1 1 1 0 1 1 1 0 0 1 1 1 1 1 1 0
1770	1 0 1 1 0 0 1 1 1 1 0 1 1 1 0 0 1 1 0 1 1 1
1771	1 0 1 1 0 0 1 1 1 0 1 0 1 0 1 1 1 1 0 0 1 1
1772	1 0 1 1 0 0 1 1 0 1 0 0 1 0 1 1 1 1 0 0 0 0 1
1773	1 0 1 1 0 0 1 1 0 1 1 1 0 0 0 0 1 0 0 1 0 1
1774	1 0 1 1 0 0 1 1 0 0 1 0 0 1 1 1 0 1 0 1 1 0 0
1775	1 0 1 1 0 0 1 1 0 0 0 1 1 1 0 0 1 1 0 1 0 0 0
1776	1 0 1 1 0 0 0 1 0 0 0 0 0 1 0 0 0 1 0 0 0 1 1
1777	1 0 1 1 0 0 0 1 0 0 1 1 1 1 1 1 1 1 0 0 1 1 1
1778	1 0 1 1 0 0 0 1 0 1 1 0 1 0 0 0 1 1 0 1 1 1 0
1779	1 0 1 1 0 0 0 1 0 1 0 1 0 0 1 1 0 1 0 1 0 1 0
1780	1 0 1 1 0 0 0 1 1 1 0 0 1 1 0 1 0 1 1 1 0 0 0
1781	1 0 1 1 0 0 0 1 1 1 1 0 1 1 0 1 1 1 1 1 0 0
1782	1 0 1 1 0 0 0 1 1 0 1 0 0 0 0 1 1 1 1 0 1 0 1
1783	1 0 1 1 0 0 0 1 1 0 0 1 1 0 1 0 0 1 1 0 0 0 1
1784	1 0 1 1 0 0 0 0 1 0 0 0 0 1 1 0 0 0 1 0 1 0 0
1785	1 0 1 1 0 0 0 0 1 0 1 1 1 1 0 1 1 0 1 0 0 0 0
1786	1 0 1 1 0 0 0 0 1 1 1 0 1 0 1 0 1 0 1 1 0 0 1
1787	1 0 1 1 0 0 0 0 1 1 0 1 0 0 0 1 0 0 1 1 1 0 1
1788	1 0 1 1 0 0 0 0 0 1 1 1 0 0 0 1 1 1 0 0 1 1 1
1789	1 0 1 1 0 0 0 0 0 1 1 1 0 1 0 0 0 1 0 1 0 1 1
1790	1 0 1 1 0 0 0 0 0 1 0 0 0 1 1 1 0 0 0 0 1 0
1791	1 0 1 1 0 0 0 0 0 0 1 1 0 0 0 0 0 0 0 0 1 1 0
1792	1 0 0 1 0 0 0 0 0 0 0 0 0 0 0 1 0 1 1 1 1 1 0
1793	1 0 0 1 0 0 0 0 0 1 1 1 0 1 0 1 1 1 1 0 1 0
1794	1 0 0 1 0 0 0 0 0 1 1 0 1 1 0 1 1 1 1 0 0 1 1
1795	1 0 0 1 0 0 0 0 0 1 0 1 0 1 1 0 0 1 1 0 1 1 1
1796	1 0 0 1 0 0 0 0 1 1 0 0 1 0 0 0 0 1 0 0 1 0 1
1797	1 0 0 1 0 0 0 0 1 1 1 1 0 0 1 1 1 1 0 0 0 0 1
1798	1 0 0 1 0 0 0 0 1 0 1 0 0 1 0 0 1 1 0 1 0 0 0
1799	1 0 0 1 0 0 0 0 1 0 0 1 1 1 1 1 0 1 0 1 1 0 0

FIG.17KK

TITLE: TRACK IDENTIFICATION CODEWORDS HAVING MULTIPLE BIT ERROR
CORRECTION CAPABILITY AND GENERALIZED GRAY CODE PROPERTY
INVENTOR: JAI N. SUBRAHMANYAM
ATTY DOCKET NUMBER: K35A1290

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TID	CODEWORD (23,11)
1800	1 0 0 1 0 0 0 1 1 0 0 0 0 0 1 1 0 0 0 1 0 0 1
1801	1 0 0 1 0 0 0 1 1 0 1 1 1 0 0 0 1 0 0 1 1 0 1
1802	1 0 0 1 0 0 0 1 1 1 1 0 1 1 1 1 0 0 0 1 0 0
1803	1 0 0 1 0 0 0 1 1 1 0 1 0 1 0 0 0 0 0 0 0 0
1804	1 0 0 1 0 0 0 1 0 1 0 0 1 0 1 0 0 0 1 0 0 1 0
1805	1 0 0 1 0 0 0 1 0 1 1 1 0 0 0 1 1 0 1 0 1 1 0
1806	1 0 0 1 0 0 0 1 0 0 1 0 0 1 1 0 1 0 1 1 1 1
1807	1 0 0 1 0 0 0 1 0 0 0 1 1 1 0 1 0 0 1 1 0 1 1
1808	1 0 0 1 0 0 1 1 0 0 0 0 0 1 0 1 1 0 1 0 0 0 0
1809	1 0 0 1 0 0 1 1 0 0 1 1 1 1 0 0 0 1 0 0 1 0 0
1810	1 0 0 1 0 0 1 1 0 1 1 0 1 0 0 1 0 0 1 1 1 0 1
1811	1 0 0 1 0 0 1 1 0 1 0 1 0 0 1 0 1 0 1 1 0 0 1
1812	1 0 0 1 0 0 1 1 1 1 0 0 1 1 0 0 1 0 0 1 0 1 1
1813	1 0 0 1 0 0 1 1 1 1 1 1 0 1 1 1 0 0 0 1 1 1 1
1814	1 0 0 1 0 0 1 1 1 0 1 0 0 0 0 0 0 0 0 0 1 1 0
1815	1 0 0 1 0 0 1 1 1 0 0 1 1 0 1 1 1 0 0 0 0 1 0
1816	1 0 0 1 0 0 1 0 1 0 0 0 0 1 1 1 1 1 0 0 1 1 1
1817	1 0 0 1 0 0 1 0 1 0 1 0 1 1 1 0 0 0 1 0 0 0 1 1
1818	1 0 0 1 0 0 1 0 1 1 1 0 1 0 1 1 0 1 0 1 0 1 0
1819	1 0 0 1 0 0 1 0 1 1 0 1 0 0 0 0 1 1 0 1 1 1 0
1820	1 0 0 1 0 0 1 0 0 1 0 0 1 1 1 0 1 1 1 1 1 0 0
1821	1 0 0 1 0 0 1 0 0 1 1 1 0 1 0 1 0 1 1 1 0 0 0
1822	1 0 0 1 0 0 1 0 0 0 1 0 0 0 1 0 0 1 1 0 0 0 1
1823	1 0 0 1 0 0 1 0 0 0 0 1 1 0 0 1 1 1 1 0 1 0 1
1824	1 0 0 1 0 1 1 0 0 0 0 0 1 0 0 0 1 1 0 0 0 1 0
1825	1 0 0 1 0 1 1 0 0 0 1 1 0 0 1 1 0 1 0 0 1 1 0
1826	1 0 0 1 0 1 1 0 0 1 1 0 0 1 0 0 0 1 0 1 1 1 1
1827	1 0 0 1 0 1 1 0 0 1 0 0 1 0 1 1 1 1 1 0 1 0 1 1
1828	1 0 0 1 0 1 1 0 1 1 0 0 0 0 0 1 1 1 1 1 0 0 1
1829	1 0 0 1 0 1 1 0 1 1 1 1 1 0 1 0 0 1 1 1 1 0 1
1830	1 0 0 1 0 1 1 0 1 0 1 0 1 1 0 1 0 1 1 0 1 0 0
1831	1 0 0 1 0 1 1 0 1 0 0 1 0 1 1 0 1 1 1 0 0 0 0
1832	1 0 0 1 0 1 1 1 1 0 0 0 1 0 1 0 1 0 1 0 1 0 1
1833	1 0 0 1 0 1 1 1 1 0 1 1 0 0 0 1 0 0 1 0 0 0 1
1834	1 0 0 1 0 1 1 1 1 1 1 0 0 1 1 0 0 0 1 1 0 0 0
1835	1 0 0 1 0 1 1 1 1 1 0 1 1 1 0 1 1 0 1 1 1 0 0
1836	1 0 0 1 0 1 1 1 0 1 0 0 0 0 1 1 1 0 0 1 1 1 0
1837	1 0 0 1 0 1 1 1 0 1 1 1 1 0 0 0 0 1 0 1 0
1838	1 0 0 1 0 1 1 1 0 0 1 0 1 1 1 0 0 0 0 0 1 1
1839	1 0 0 1 0 1 1 1 0 0 0 1 0 1 0 0 1 0 0 0 1 1 1
1840	1 0 0 1 0 1 0 1 0 0 0 0 1 1 0 0 0 0 1 1 0 0
1841	1 0 0 1 0 1 0 1 0 0 1 1 0 1 1 1 1 0 0 1 0 0 0
1842	1 0 0 1 0 1 0 1 0 1 1 0 0 0 0 1 0 0 0 0 0 1
1843	1 0 0 1 0 1 0 1 0 1 0 1 1 0 1 1 0 0 0 0 1 0 1
1844	1 0 0 1 0 1 0 1 1 1 0 0 0 1 0 1 0 0 1 0 1 1 1
1845	1 0 0 1 0 1 0 1 1 1 1 1 1 1 0 1 0 1 0 0 1 1
1846	1 0 0 1 0 1 0 1 1 0 1 0 1 0 0 1 1 0 1 1 0 1 0
1847	1 0 0 1 0 1 0 1 1 0 0 1 0 0 1 0 0 0 1 1 1 0
1848	1 0 0 1 0 1 0 0 1 0 0 0 1 1 1 0 0 1 1 0 1 1
1849	1 0 0 1 0 1 0 0 1 0 1 1 0 1 0 1 1 1 1 1 1 1

TID	CODEWORD (23,11)
1850	1 0 0 1 0 1 0 0 1 1 1 0 0 0 1 0 1 1 1 0 1 1 0
1851	1 0 0 1 0 1 0 0 1 1 0 1 1 0 0 1 0 1 1 0 0 1 0
1852	1 0 0 1 0 1 0 0 0 1 0 0 0 1 1 1 0 1 0 0 0 0 0
1853	1 0 0 1 0 1 0 0 0 1 1 1 1 0 0 1 1 0 0 1 0 0
1854	1 0 0 1 0 1 0 0 0 0 1 0 1 0 1 1 1 1 0 1 1 0 1
1855	1 0 0 1 0 1 0 0 0 0 1 0 0 0 0 0 1 0 1 0 0 1
1856	1 0 0 1 1 1 0 0 0 0 0 0 0 1 0 0 0 0 0 1 1 1
1857	1 0 0 1 1 1 0 0 0 0 1 1 1 0 0 1 1 0 0 0 0 1 1
1858	1 0 0 1 1 1 0 0 0 1 1 0 1 1 1 0 1 0 0 1 0 1 0
1859	1 0 0 1 1 1 0 0 0 1 0 1 0 1 0 1 0 0 0 1 1 1 0
1860	1 0 0 1 1 1 0 0 1 1 0 0 1 0 1 1 0 0 1 1 1 0 0
1861	1 0 0 1 1 1 0 0 1 1 1 1 0 0 0 0 1 0 1 1 0 0 0
1862	1 0 0 1 1 1 0 0 1 0 1 0 0 1 1 1 1 0 1 0 0 0 1
1863	1 0 0 1 1 1 0 0 1 0 0 1 1 1 0 0 0 0 1 0 1 0 1
1864	1 0 0 1 1 1 0 1 1 0 0 0 0 0 0 0 1 1 0 0 0 0
1865	1 0 0 1 1 1 0 1 1 0 1 1 1 0 1 1 1 1 1 0 1 0 0
1866	1 0 0 1 1 1 0 1 1 1 1 0 1 1 0 0 1 1 1 1 1 0 1
1867	1 0 0 1 1 1 0 1 1 1 0 1 0 1 1 1 0 1 1 1 0 0 1
1868	1 0 0 1 1 1 0 1 0 1 0 0 1 0 0 1 0 1 0 1 0 1 1
1869	1 0 0 1 1 1 0 1 0 1 1 1 0 0 1 0 1 1 0 1 1 1 1
1870	1 0 0 1 1 1 0 1 0 0 1 0 0 1 0 1 1 1 0 0 1 1 0
1871	1 0 0 1 1 1 0 1 0 0 0 1 1 1 1 0 0 1 0 0 0 1 0
1872	1 0 0 1 1 1 1 1 0 0 0 0 0 1 1 0 1 1 0 1 0 0 1
1873	1 0 0 1 1 1 1 1 0 0 1 1 1 1 0 1 0 1 0 1 1 0 1
1874	1 0 0 1 1 1 1 1 0 1 1 0 1 0 1 0 0 1 0 0 1 0 0
1875	1 0 0 1 1 1 1 1 0 1 0 1 0 0 0 1 1 1 0 0 0 0 0
1876	1 0 0 1 1 1 1 1 1 0 0 1 1 1 1 1 1 1 0 0 1 0
1877	1 0 0 1 1 1 1 1 1 1 1 0 1 0 0 0 1 1 0 1 1 0
1878	1 0 0 1 1 1 1 1 1 0 1 0 0 0 1 1 0 1 1 1 1 1 1
1879	1 0 0 1 1 1 1 1 0 0 1 1 0 0 0 1 1 1 1 0 0
1880	1 0 0 1 1 1 1 0 1 0 0 0 0 1 0 0 1 0 1 1 1 1 0
1881	1 0 0 1 1 1 1 0 1 0 1 1 1 1 1 0 0 1 1 0 1 0
1882	1 0 0 1 1 1 1 0 1 1 1 0 1 0 0 0 0 0 1 0 0 1 1
1883	1 0 0 1 1 1 1 0 1 1 0 1 0 0 1 1 1 0 1 0 1 1 1
1884	1 0 0 1 1 1 1 0 0 1 0 0 1 1 0 1 1 0 0 0 1 0 1
1885	1 0 0 1 1 1 1 0 0 1 1 1 0 1 1 0 0 0 0 0 0 0 1
1886	1 0 0 1 1 1 1 0 0 0 1 0 0 0 0 1 0 0 0 1 0 0 0
1887	1 0 0 1 1 1 1 0 0 0 0 1 1 0 1 0 1 0 0 1 1 0 0
1888	1 0 0 1 1 0 1 0 0 0 0 0 1 0 0 1 1 1 0 1 1 1 1
1889	1 0 0 1 1 0 1 0 0 0 1 1 0 0 0 0 0 0 1 1 1 1 1
1890	1 0 0 1 1 0 1 0 0 1 1 0 0 1 1 1 0 0 1 0 1 1 0
1891	1 0 0 1 1 0 1 0 0 1 0 1 1 1 0 0 1 0 1 0 0 1 0
1892	1 0 0 1 1 0 1 0 1 1 0 0 0 1 0 1 0 0 0 0 0 0
1893	1 0 0 1 1 0 1 0 1 1 1 1 1 0 0 1 0 0 0 0 1 0 0
1894	1 0 0 1 1 0 1 0 1 0 1 0 1 1 1 0 0 0 0 1 1 0 1
1895	1 0 0 1 1 0 1 0 1 0 0 1 0 1 0 1 1 0 0 1 0 0 1
1896	1 0 0 1 1 0 1 1 1 0 0 0 1 0 0 1 1 1 0 1 1 0 0
1897	1 0 0 1 1 0 1 1 1 0 1 1 0 0 1 0 0 1 0 1 0 0 0
1898	1 0 0 1 1 0 1 1 1 1 1 0 0 1 0 1 0 1 0 0 0 0 1
1899	1 0 0 1 1 0 1 1 1 1 0 1 1 1 1 0 1 1 0 0 1 0 1

FIG.17LL   FIG.17MM

TITLE: TRACK IDENTIFICATION CODEWORDS HAVING MULTIPLE BIT ERROR
CORRECTION CAPABILITY AND GENERALIZED GRAY CODE PROPERTY
INVENTOR: JAI N. SUBRAHMANYAM
ATTY DOCKET NUMBER: K35A1290

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TID	CODEWORD (23,11)
1900	1 0 0 1 1 0 1 1 0 1 0 0 0 0 0 0 1 1 1 0 1 1 1
1901	1 0 0 1 1 0 1 1 0 1 1 1 1 0 1 1 0 1 1 0 0 1 1
1902	1 0 0 1 1 0 1 1 0 0 1 0 1 1 0 0 0 1 1 1 0 1 0
1903	1 0 0 1 1 0 1 1 0 0 0 1 0 1 1 1 1 1 1 1 1 1 0
1904	1 0 0 1 1 0 0 1 0 0 0 0 1 1 1 1 0 1 1 0 1 0 1
1905	1 0 0 1 1 0 0 1 0 0 1 1 0 1 0 0 1 1 1 0 0 0 1
1906	1 0 0 1 1 0 0 1 0 1 1 0 0 0 1 1 1 1 1 0 0 0
1907	1 0 0 1 1 0 0 1 0 1 0 1 1 0 0 0 0 1 1 1 1 0 0
1908	1 0 0 1 1 0 0 1 1 1 0 0 0 1 0 0 1 0 1 1 1 0
1909	1 0 0 1 1 0 0 1 1 1 1 1 1 0 1 1 1 0 1 0 1 0
1910	1 0 0 1 1 0 0 1 1 0 1 0 1 0 1 0 1 1 0 0 0 1 1
1911	1 0 0 1 1 0 0 1 1 0 0 1 0 0 0 1 0 1 0 0 1 1 1
1912	1 0 0 1 1 0 0 0 1 0 0 0 1 1 0 1 0 0 0 0 0 1 0
1913	1 0 0 1 1 0 0 0 1 0 1 1 0 1 1 0 1 0 0 0 1 1 0
1914	1 0 0 1 1 0 0 0 1 1 1 0 0 0 0 1 1 0 0 1 1 1 1
1915	1 0 0 1 1 0 0 0 1 1 0 1 1 0 1 0 0 0 0 1 0 1 1
1916	1 0 0 1 1 0 0 0 0 1 0 0 0 1 0 0 0 0 1 1 0 0 1
1917	1 0 0 1 1 0 0 0 0 1 1 1 1 1 1 1 0 1 1 1 0 1
1918	1 0 0 1 1 0 0 0 0 0 1 0 1 0 0 0 1 0 1 0 1 0 0
1919	1 0 0 1 1 0 0 0 0 1 0 0 1 1 0 0 1 0 0 0 0
1920	1 0 0 0 1 0 0 0 0 0 0 0 1 1 1 1 0 0 1 1 0 0
1921	1 0 0 0 1 0 0 0 0 0 1 1 1 1 0 0 0 0 0 1 0 0 0
1922	1 0 0 0 1 0 0 0 0 1 1 0 1 0 1 1 0 0 0 0 0 0 1
1923	1 0 0 0 1 0 0 0 0 1 0 1 0 0 0 0 1 0 0 0 1 0 1
1924	1 0 0 0 1 0 0 0 1 1 0 0 1 1 1 0 1 0 1 0 1 1 1
1925	1 0 0 0 1 0 0 0 1 1 1 0 1 0 1 0 0 1 0 0 1 1
1926	1 0 0 0 1 0 0 0 1 0 1 0 0 0 1 0 0 0 1 1 0 1 0
1927	1 0 0 0 1 0 0 0 1 0 0 1 1 0 0 1 1 0 1 1 1 1 0
1928	1 0 0 0 1 0 0 1 1 0 0 0 0 1 0 1 1 1 1 1 0 1 1
1929	1 0 0 0 1 0 0 1 1 0 1 1 1 1 0 0 1 1 1 1 1 1
1930	1 0 0 0 1 0 0 1 1 1 1 0 1 0 0 1 0 1 1 0 1 1 0
1931	1 0 0 0 1 0 0 1 1 1 0 1 0 0 1 0 1 1 1 0 0 1 0
1932	1 0 0 0 1 0 0 1 0 1 0 0 1 1 0 0 1 1 0 0 0 0 0
1933	1 0 0 0 1 0 0 1 0 1 1 1 0 1 1 1 0 1 0 0 1 0 0
1934	1 0 0 0 1 0 0 1 0 0 1 0 0 0 0 0 0 1 0 1 1 0 1
1935	1 0 0 0 1 0 0 1 0 0 0 1 1 0 1 1 1 1 0 1 0 0 1
1936	1 0 0 0 1 0 1 1 0 0 0 0 0 0 1 1 0 1 0 0 0 1 0
1937	1 0 0 0 1 0 1 1 0 0 1 1 0 0 0 1 1 0 0 1 1 0
1938	1 0 0 0 1 0 1 1 0 1 1 0 1 1 1 1 1 0 1 1 1 1
1939	1 0 0 0 1 0 1 1 0 1 0 1 0 1 0 0 0 1 0 1 0 1 1
1940	1 0 0 0 1 0 1 1 1 1 0 0 1 0 1 0 0 1 1 1 0 0 1
1941	1 0 0 0 1 0 1 1 1 1 1 1 0 0 0 1 1 1 1 1 1 0 1
1942	1 0 0 0 1 0 1 1 1 0 1 0 0 1 1 0 1 1 1 0 1 0 0
1943	1 0 0 0 1 0 1 1 1 0 0 1 1 1 0 1 0 1 1 0 0 0 0
1944	1 0 0 0 1 0 1 0 1 0 0 0 0 0 0 1 0 0 1 0 1 0 1
1945	1 0 0 0 1 0 1 0 1 0 1 1 1 0 1 0 1 0 1 0 0 0 1
1946	1 0 0 0 1 0 1 0 1 1 1 0 1 1 0 1 1 0 1 1 0 0 0
1947	1 0 0 0 1 0 1 0 1 1 0 1 0 1 1 0 0 0 1 1 1 1 0
1948	1 0 0 0 1 0 1 0 0 1 0 0 1 0 0 0 0 0 0 1 1 1 0
1949	1 0 0 0 1 0 1 0 0 1 1 1 0 0 1 1 1 0 0 1 0 1 0

FIG.17NN

TID	CODEWORD (23,11)
1950	1 0 0 0 1 0 1 0 0 0 1 0 0 1 0 0 1 0 0 0 0 1 1
1951	1 0 0 0 1 0 1 0 0 0 0 1 1 1 1 1 0 0 0 0 1 1 1
1952	1 0 0 0 1 1 1 0 0 0 0 0 1 1 0 0 0 1 0 0 0 0
1953	1 0 0 0 1 1 1 0 0 0 1 1 0 1 0 1 1 0 1 0 1 0 0
1954	1 0 0 0 1 1 1 0 0 1 1 0 0 0 1 0 1 0 1 1 1 0 1
1955	1 0 0 0 1 1 1 0 0 1 0 1 1 0 0 1 0 0 1 1 0 0 1
1956	1 0 0 0 1 1 1 0 1 1 0 0 0 1 1 1 0 0 0 1 0 1 1
1957	1 0 0 0 1 1 1 0 1 1 1 1 1 1 0 0 1 0 0 1 1 1 1
1958	1 0 0 0 1 1 1 0 1 0 1 0 1 0 1 1 1 0 0 0 1 1 0
1959	1 0 0 0 1 1 1 0 1 0 0 1 0 0 0 0 0 0 0 0 0 1 0
1960	1 0 0 0 1 1 1 1 1 0 0 0 1 1 0 0 0 1 0 0 1 1 1
1961	1 0 0 0 1 1 1 1 1 0 1 1 0 1 1 1 1 1 0 0 0 1 1
1962	1 0 0 0 1 1 1 1 1 1 0 0 0 0 1 1 0 1 0 1 0
1963	1 0 0 0 1 1 1 1 1 0 1 1 0 1 1 0 1 0 1 1 1 0
1964	1 0 0 0 1 1 1 1 0 1 0 0 0 1 0 1 0 1 1 1 1 0 0
1965	1 0 0 0 1 1 1 1 0 1 1 1 1 1 1 0 1 1 1 1 0 0 0
1966	1 0 0 0 1 1 1 1 0 0 1 0 1 0 0 1 1 1 1 0 0 0 1
1967	1 0 0 0 1 1 1 1 0 0 0 1 0 0 1 0 0 1 1 0 1 0 1
1968	1 0 0 0 1 1 0 1 0 0 0 0 0 1 0 1 0 1 1 1 1 1 0
1969	1 0 0 0 1 1 0 1 0 0 1 1 0 0 0 1 0 1 1 1 0 1 0
1970	1 0 0 0 1 1 0 1 0 1 1 0 0 1 1 0 0 1 1 0 0 1 1
1971	1 0 0 0 1 1 0 1 0 1 0 1 1 1 0 1 1 1 1 0 1 1 1
1972	1 0 0 0 1 1 0 1 1 1 0 0 0 0 1 1 1 1 0 0 1 0 1
1973	1 0 0 0 1 1 0 1 1 1 1 1 1 0 0 0 0 1 0 0 0 0 1
1974	1 0 0 0 1 1 0 1 1 0 1 0 1 1 1 0 1 0 1 0 0 0
1975	1 0 0 0 1 1 0 1 1 0 0 1 0 1 0 0 1 1 0 1 1 0 0
1976	1 0 0 0 1 1 0 0 1 0 0 0 1 0 0 0 1 0 0 1 0 0 1
1977	1 0 0 0 1 1 0 0 1 0 1 1 0 0 1 1 0 0 0 1 1 0 1
1978	1 0 0 0 1 1 0 0 1 1 1 0 0 1 0 0 0 0 0 0 1 0 0
1979	1 0 0 0 1 1 0 0 1 1 0 1 1 1 1 1 1 0 0 0 0 0 0
1980	1 0 0 0 1 1 0 0 0 1 0 0 0 0 0 1 1 0 1 0 0 1 0
1981	1 0 0 0 1 1 0 0 0 1 1 1 1 0 1 0 0 0 1 0 1 1 0
1982	1 0 0 0 1 1 0 0 0 0 1 0 1 1 0 1 0 0 1 1 1 1 1
1983	1 0 0 0 1 1 0 0 0 0 0 1 0 1 1 0 1 0 1 1 0 1 1
1984	1 0 0 0 0 1 0 0 0 0 0 0 1 0 0 1 1 1 0 1 0 1
1985	1 0 0 0 0 1 0 0 0 0 1 1 1 1 1 1 0 1 1 0 0 0 1
1986	1 0 0 0 0 1 0 0 0 1 1 0 1 0 0 0 0 1 1 1 0 0 0
1987	1 0 0 0 0 1 0 0 0 1 0 1 0 0 1 1 1 1 1 1 0 0
1988	1 0 0 0 0 1 0 0 1 1 0 0 1 1 0 1 1 1 0 1 1 1 0
1989	1 0 0 0 0 1 0 0 1 1 1 1 0 1 1 0 0 1 0 1 0 1 0
1990	1 0 0 0 0 1 0 0 1 0 1 0 0 0 0 1 0 1 0 0 0 1 1
1991	1 0 0 0 0 1 0 0 1 0 0 1 1 0 1 0 1 1 0 0 1 1 1
1992	1 0 0 0 0 1 0 1 1 0 0 0 0 1 1 0 1 0 0 0 0 1 0
1993	1 0 0 0 0 1 0 1 1 0 1 1 1 0 1 0 0 0 0 1 1 0
1994	1 0 0 0 0 1 0 1 1 1 0 1 0 1 0 0 0 0 1 1 1 1
1995	1 0 0 0 0 1 0 1 1 1 0 1 0 0 0 1 1 0 0 1 0 1 1
1996	1 0 0 0 0 1 0 1 0 1 0 0 1 1 1 1 1 0 1 1 0 0 1
1997	1 0 0 0 0 1 0 1 0 1 1 1 0 1 0 0 0 0 1 1 1 0 1
1998	1 0 0 0 0 1 0 1 0 0 1 0 0 0 1 1 0 0 1 0 1 0 0
1999	1 0 0 0 0 1 0 1 0 0 0 1 1 0 0 0 1 0 1 0 0 0 0

FIG.17OO

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TID	CODEWORD (23,11)
2000	1 0 0 0 0 1 1 1 0 0 0 0 0 0 0 0 0 1 1 0 1 1
2001	1 0 0 0 0 1 1 1 0 0 1 1 1 0 1 1 1 0 1 1 1 1 1
2002	1 0 0 0 0 1 1 1 0 1 1 0 1 1 0 0 1 0 1 0 1 1 0
2003	1 0 0 0 0 1 1 1 0 1 0 1 0 1 1 1 0 0 1 0 0 1 0
2004	1 0 0 0 0 1 1 1 1 1 0 0 1 0 0 1 0 0 0 0 0 0 0
2005	1 0 0 0 0 1 1 1 1 1 1 1 0 0 1 0 1 0 0 0 1 0 0
2006	1 0 0 0 0 1 1 1 1 0 1 0 0 1 0 1 1 0 0 1 1 0 1
2007	1 0 0 0 0 1 1 1 1 0 0 1 1 1 1 0 0 0 0 1 0 0 1
2008	1 0 0 0 0 1 1 0 1 0 1 0 0 0 0 0 1 0 0 1 0 1 1 0 0
2009	1 0 0 0 0 1 1 0 1 0 1 1 1 0 0 1 1 1 1 0 1 0 0 0
2010	1 0 0 0 0 1 1 0 1 1 1 0 1 1 1 0 1 1 0 0 0 0 1
2011	1 0 0 0 0 1 1 0 1 1 0 1 0 1 0 1 0 0 1 0 1
2012	1 0 0 0 0 1 1 0 0 1 0 0 1 0 1 1 0 1 1 0 1 1 1
2013	1 0 0 0 0 1 1 0 0 1 1 1 0 0 0 0 1 1 1 0 0 1 1
2014	1 0 0 0 0 1 1 0 0 0 1 0 0 1 1 1 1 1 1 1 0 1 0
2015	1 0 0 0 0 1 1 0 0 0 0 1 1 1 0 0 0 1 1 1 1 1 0
2016	1 0 0 0 0 0 1 0 0 0 0 0 1 1 0 1 0 1 0 1 0 0 1
2017	1 0 0 0 0 0 1 0 0 0 1 1 0 1 1 0 1 1 1 0 1 1 0 1
2018	1 0 0 0 0 0 1 0 0 1 1 0 0 0 0 1 1 1 0 0 1 0 0
2019	1 0 0 0 0 0 1 0 0 1 0 1 1 0 1 0 0 1 0 0 0 0 0
2020	1 0 0 0 0 0 1 0 1 1 0 0 0 1 0 0 0 1 1 0 0 1 0
2021	1 0 0 0 0 0 1 0 1 1 1 1 1 1 1 1 1 1 1 0 1 1 0
2022	1 0 0 0 0 0 1 0 1 0 1 0 1 0 0 0 1 1 1 1 1 1 1
2023	1 0 0 0 0 0 1 0 1 0 0 1 0 0 1 1 0 1 1 1 0 1 1
2024	1 0 0 0 0 0 1 1 1 0 0 0 1 1 1 1 0 0 1 1 1 1 0
2025	1 0 0 0 0 0 1 1 1 0 1 1 0 1 0 0 1 0 1 1 0 1 0
2026	1 0 0 0 0 0 1 1 1 1 1 0 0 0 1 1 1 0 1 0 0 1 1
2027	1 0 0 0 0 0 1 1 1 1 0 1 1 0 0 0 0 0 1 0 1 1 1
2028	1 0 0 0 0 0 1 1 0 1 0 0 0 1 1 0 0 0 0 0 1 0 1
2029	1 0 0 0 0 0 1 1 0 1 1 1 1 1 0 1 1 0 0 0 0 0 1
2030	1 0 0 0 0 0 1 1 0 0 1 0 1 0 1 0 1 0 0 1 0 0 0
2031	1 0 0 0 0 0 1 1 0 0 0 1 0 0 0 1 0 0 0 1 1 0 0
2032	1 0 0 0 0 0 0 1 0 0 0 0 1 0 0 1 1 0 0 0 1 1 1
2033	1 0 0 0 0 0 0 1 0 0 1 1 0 0 1 0 0 0 0 0 0 1 1
2034	1 0 0 0 0 0 0 1 0 1 1 0 0 1 0 1 0 0 0 1 0 1 0
2035	1 0 0 0 0 0 0 1 0 1 0 1 1 1 1 0 1 0 0 1 1 1 0
2036	1 0 0 0 0 0 0 1 1 1 0 0 0 0 0 0 1 0 1 1 1 0 0
2037	1 0 0 0 0 0 0 1 1 1 1 1 1 0 1 1 0 0 1 1 0 0 0
2038	1 0 0 0 0 0 0 1 1 0 1 0 1 1 0 0 0 0 1 0 0 0 1
2039	1 0 0 0 0 0 0 1 1 0 0 1 0 1 1 1 1 0 1 0 1 0 1
2040	1 0 0 0 0 0 0 0 1 0 0 0 1 0 1 1 1 1 1 0 0 0 0
2041	1 0 0 0 0 0 0 0 1 0 1 1 0 0 0 0 0 1 1 0 1 0 0
2042	1 0 0 0 0 0 0 0 1 1 1 0 0 1 1 1 0 1 1 1 1 0 1
2043	1 0 0 0 0 0 0 0 1 1 0 1 1 1 0 0 1 1 1 1 0 0 1
2044	1 0 0 0 0 0 0 0 0 1 0 0 0 0 1 0 1 1 0 1 0 1 1
2045	1 0 0 0 0 0 0 0 0 1 1 1 1 0 0 1 0 1 0 1 1 1 1
2046	1 0 0 0 0 0 0 0 0 0 1 0 1 1 1 0 0 1 0 0 1 1 0
2047	1 0 0 0 0 0 0 0 0 0 0 1 0 1 0 1 1 1 0 0 0 1 0

FIG.17PP

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$$
H16 = \begin{bmatrix}
1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\
1 & -1 & 1 & -1 & 1 & -1 & 1 & -1 & 1 & -1 & 1 & -1 & 1 & -1 & 1 & -1 \\
1 & 1 & -1 & -1 & 1 & 1 & -1 & -1 & 1 & 1 & -1 & -1 & 1 & 1 & -1 & -1 \\
1 & -1 & -1 & 1 & 1 & -1 & -1 & 1 & 1 & -1 & -1 & 1 & 1 & -1 & -1 & 1 \\
1 & 1 & 1 & 1 & -1 & -1 & -1 & -1 & 1 & 1 & 1 & 1 & -1 & -1 & -1 & -1 \\
1 & -1 & 1 & -1 & -1 & 1 & -1 & 1 & 1 & -1 & 1 & -1 & -1 & 1 & -1 & 1 \\
1 & 1 & -1 & -1 & -1 & -1 & 1 & 1 & 1 & 1 & -1 & -1 & -1 & -1 & 1 & 1 \\
1 & -1 & -1 & 1 & -1 & 1 & 1 & -1 & 1 & -1 & -1 & 1 & -1 & 1 & 1 & -1 \\
1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & -1 & -1 & -1 & -1 & -1 & -1 & 1 & -1 \\
1 & -1 & 1 & -1 & 1 & -1 & 1 & -1 & -1 & 1 & -1 & 1 & -1 & 1 & -1 & 1 \\
1 & 1 & -1 & -1 & 1 & 1 & -1 & -1 & -1 & -1 & 1 & 1 & -1 & -1 & 1 & 1 \\
1 & -1 & -1 & 1 & 1 & -1 & -1 & 1 & -1 & 1 & 1 & -1 & -1 & 1 & 1 & -1 \\
1 & 1 & 1 & 1 & -1 & -1 & -1 & -1 & -1 & -1 & -1 & -1 & 1 & 1 & 1 & 1 \\
1 & -1 & 1 & -1 & -1 & 1 & -1 & 1 & -1 & 1 & -1 & 1 & 1 & -1 & 1 & -1 \\
1 & 1 & -1 & -1 & -1 & -1 & 1 & 1 & -1 & -1 & 1 & 1 & 1 & 1 & -1 & -1 \\
1 & -1 & -1 & 1 & -1 & 1 & 1 & -1 & -1 & 1 & 1 & -1 & 1 & -1 & -1 & 1
\end{bmatrix}
$$

FIG.18